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TO

EDWARD BURNETT TYLOR,

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EX-PRESIDENT OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
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To commemorate the occasion of your seventy-fifth birthday, and in token of admiration and regard, the Royal Anthropological Institute of Great Britain and Ireland dedicates to you this current volume of its *Journal.*

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Year of
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Year of Election.

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Year of Election.

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Year of Election.

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Year of Election.

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1869 Jeffery, F. J., Esq. (*)

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1903 Pearson, Prof. Karl, F.R.S., *University College, London ;* 7 *Well Road, Hampstead, N.W.* (¶)

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Year of
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— Japan Society.
— Nature.
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— Royal Archæological Institute.
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EUROPE.

Austro-Hungary.

Agram... Kroätische Archäologische Gesellschaft.
Budapest... Magyar Tudományos Akademia.
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Cracow... Akademija Umiejetnósci.
Sarajevo... Landesmuseum (Wissenschaftliche Mittheilungen aus Bosnien).
Vienna... Anthropologische Gesellschaft.
— K. Akademie der Wissenschaften.

Belgium.

Brussels... Académie Royale des Sciences.
— Instituts Solvay.
— Société d'Anthropologie de Bruxelles.
— Société d'Archéologie de Bruxelles.

Denmark.

Copenhagen... Société des Antiquaires du Nord.

France.

Lyons... Société d'Anthropologie de Lyon.
Paris... L'Anthropologie.
— École d'Anthropologie.
— Revue de l'Histoire des Religions.
Paris... Soc. des Americanistes.
— Société d'Anthropologie.
— Année Sociologique.

Germany.

Berlin... Berliner Gesellschaft für Anthropologie, Ethnologie, und Urgeschichte.
— K. Museum für Völkerkunde.
— Seminar für Orientalische Sprachen.
Brunswick ... Zentralblatt für Anthropologie, etc.
Cologne...Rautenstrauch-Joest-Museum.
Giessen... Hessische Blätter.
Gotha... Petermann's Mittheilungen.
Halle-a-d-Saale... Kaiserliche Leopoldina Carolina Akademie der Deutschen Naturforscher.
— Deutsche Morgenländische Gesellschaft.
Kiel... Anthropologischer Verein für Schleswig-Holstein.
Leipzig... Archiv für Religionswissenschaft.
— Archiv für Rassen und Gesellschaft Biologie.

Leipzig... Verein für Erdkunde.

Munich... Deutsche Gesellschaft für Anthropologie, Ethnologie, und Urgeschichte.

Stuttgart... Zeitschrift für Morphologie und Anthropologie.

GREECE.

Athens... Ephemeris Archaiologikè.

— Annual of the British School of Archæology.

ITALY.

Florence... Società Italiana di Antropologia, Etnologia, e Psicologia Comparata.

Rome... Accademia dei Lincei.

— Bullettino di Paletnologia Italiana.

— Società Romana di Antropologia.

Turin... Archivio di Psichiatria.

NETHERLANDS.

Amsterdam... Koninklijke Akademie van Wetenschappen.

Leiden... Internationales Archiv für Ethnographie.

The Hague... Koninklijk Instituut voor de Taal-, Land-, en Volkenkunde van Nederlandsch Indië.

PORTUGAL.

Lisbon... Portugal em Africa.

Porto... Portugalia.

RUSSIA.

Dorpat...Publications of the University.

Helsingfors... Suomen Muinaismuistoyhdistyksen Arkakauskirja (Journal of the Finnish Archæological Society).

Moscow... Imper. Obshchestvo Lubitelei Iestestvoznania, Antropologii, i Etnografii.

St. Petersburg... Imper. Akademia Nauk.

SWEDEN.

Stockholm... Academy of Antiquities, National Museum.

— Nordiska Museet.

— Ymer.

SWITZERLAND.

Neuchâtel ... Soc. Neuchateloise de Géographie.

Zurich... Musée National Suisse.

AFRICA.

Cape Town... S. African Philosophical Society.

AMERICA.

ARGENTINE.

La Plata ... Museum.

BRAZIL.

Rio de Janeiro... Museu Nacional.

CANADA.

Montreal... Royal Society of Canada.

Toronto... Canadian Institute.

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Berkeley, Cal.... University of California.

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Chicago... American Antiquarian.

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New York... American Museum of Natural History.

Philadelphia... Free Museum of Science and Art (University of Philadelphia, Department of Archæology.)

Washington... American Anthropologist.

— Bureau of Ethnology.

— Smithsonian Institution.

— United States Geological Survey.

— United States National Museum.

Worcester, Mass.... American Journal of Psychology.

ASIA.

CHINA.

Shanghai... Royal Asiatic Society (China branch).

INDIA.

Bombay... Anthropological Society.

— Indian Antiquary.

Calcutta... Bengal Asiatic Society.
Colombo... Royal Asiatic Society (Ceylon branch).
Simla...Archæological Reports.

JAPAN.

Tokio... Asiatic Society of Japan.
— Tokio-Daigaku (Imperial University).

JAVA.

Batavia... Bataviaasche Genootschap van Kunsten en Wetenschappen.

PHILIPPINE ISLANDS.

Manila...Ethnological Survey of the Philippine Islands.

STRAITS SETTLEMENTS.

Singapore... Royal Asiatic Society (Straits Branch).

AUSTRALIA AND PACIFIC.

Honolulu... Bernice Pauahi Bishop Museum.
Melbourne... Royal Society of Victoria.
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Sydney... Australian Museum
— Australasian Association for the Advancement of Science.
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PUBLICATIONS RECEIVED IN EXCHANGE FOR "*MAN*."

ENGLAND.

Colchester...Transactions of the Essex Archæological Society.
Hull... The Naturalist.
Liverpool..Institute of Tropical Research.
— Journal of the Gypsy Lore Society.
London... Church Missionary Review.
— Journal of the East India Association.
— Lancet.
— Reliquary and Illustrated Archæologist.
— Saga-Book of the Viking Club.
— Sociological Review.
— South American Missionary Society.

ARGENTINE.

La Plata ... Museum.

AUSTRO-HUNGARY.

Budapest ... Magyar Nemzeti Museum.
Mödling ... Anthropos.
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BELGIUM.

Brussels... Bulletin de la Société d'Études Coloniales.
— Bull. de la Soc. Géographie.
— Instituts Solvay.
— Missions Belges.
Ghent... Volkskunde.

FRANCE.

Dax... Société de Borda.
Paris...Revue des Études Ethnographiques.
— Revue des Traditions Populaires.
— Melusine.
— L'Homme Préhistorique.
— La Revue Préhistorique.

GERMANY.

Brunswick... Globus.
Danzig... West Preussiches Provincial-Museum.
Dresden... Bericht des Vereins für Erdkunde.
Giessen...Hessische Blätter.
Guben... Niederlauzitzer Mittheilungen.
Hamburg... Museum für Völkerkunde.
Munich... Correspondenzblatt.
— Geographische Gesellschaft.
— Prähistorische Blätter.
Nürnberg... Bericht der Natur-historischen Gesellschaft.

INDIA.

Simla...Archæological Reports.

ITALY.

Como... Rivista Archeologica della Provincia de Como.

Palermo... La Scienza Sociale.
Rome... Rivista Italiana di Sociologia.

NATAL.

Pietermaritzburg ... Museum.

NEW SOUTH WALES.

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OCEANIA.

Fiji... Na Mata.
Samoa... O le Sulu.

PORTUGAL.

Lisbon... Archeologo Portuguès.
Serpa... A Tradição.

RHODESIA.

Bulawayo... Proceedings of the Rhodesian Scientific Association.

RUSSIA.

St. Petersburg... Zhivaya Starina.

SWITZERLAND.

Zürich... Schweizerisches Archiv für Volkskunde.

UNITED STATES.

Andover, Mass.... Phillips Academy (Dept. of Archæology).
Boston... American Journal of Archæology.
Chicago... Open Court.
New York ... American Museum of Natural History.
— Popular Science Monthly.
— Science.
Philadelphia... Proceedings of American Philosophical Society.
Washington ... Bureau of American Ethnology.
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JOURNAL

OF THE

ROYAL ANTHROPOLOGICAL INSTITUTE

OF GREAT BRITAIN AND IRELAND.

ANNUAL GENERAL MEETING.

JANUARY 22ND, 1907.

Professor W. GOWLAND, F.S.A., *President, in the Chair.*

The Minutes of the last Annual General Meeting were read and confirmed.

The PRESIDENT appointed Dr. R. W. FELKIN and Mr. R. A. DURAND Scrutineers, and declared the ballot open.

The SECRETARY read the Report of the Council for 1906 (p. 2).

The TREASURER presented his Report for 1906 (p. 6).

The Reports were in each case carried unanimously.

The PRESIDENT delivered his address on "The Burial Mounds and Dolmens of the Early Emperors of Japan" (p. 10).

The SCRUTINEERS handed in their Report, and the following were declared to be duly elected as Officers and Council for the year 1907–8:—

President.—Professor D. J. Cunningham, M.D., D.C.L., F.R.S.

Vice-Presidents.

Col. Sir T. H. Holdich, K.C.M.G., K.C.I.E., C.B.
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F. C. Shrubsall, Esq., M.D.
N. W. Thomas, Esq., M.A.
E. Westermarck, Esq., Ph.D.
W. Wright, Esq., M.B., D.Sc.
G. Udny Yule, Esq., F.S.S.

Professor D. J. CUNNINGHAM, M.D., D.C.L., F.R.S., was then installed as President.

Professor CUNNINGHAM returned thanks for his election, and moved that a hearty vote of thanks be accorded to Professor GOWLAND for his services to the Institute, and for his address, and that he be asked to allow the latter to be printed in the *Journal.*

The vote was carried by acclamation.

Professor GOWLAND replied.

Votes of thanks were moved, to the Officers, by Mr. DALTON, to the outgoing members of Council, by Mr. LEWIS, and to the Scrutineers, by Mr. GRAY, and were all carried unanimously.

REPORT OF THE COUNCIL FOR 1906.

Once more the Council is happy to report a year of substantial progress, and is pleased to call attention to the fact that a record number of new Fellows, viz., 41, has been elected. The following table shows the numerical gains and losses of the Institute.

	Honorary Fellows.	Corresponding Fellows.	Local Correspondents.	Ordinary Fellows.		Total Ordinary	Total Membership.
				Compounding.	Subscribing		
1 Jan., 1906 ...	45	8	30	74	287	361	444
Less by death or resignation.		−2		−2	−12	−14	−16
Since elected ...	—	—	+1	+3	+38	+41	+42
Since transferred	—	—	—	+3	−3	—	—
1 Jan., 1907 ...	45	6	31	78	310	388	470

Among the losses which the Council has to deplore may be mentioned Mr. James Bonwick, Mr. R. I. Finnemore, puisne Judge of Natal, Mr. F. J. Horniman, M.P., Major F. I. Ricarde-Seaver and Mr. Coutts Trotter.

To the death of Mr. Bonwick attention has already been called in a short obituary notice published in *Man,* 1906, 25. He became a member of the Ethnological Society in 1869, and was subsequently a fellow of the Institute from the foundation of the latter. He was the author of several works, dealing chiefly with the natives of Tasmania. The Institute will greatly regret the loss of a Fellow of so long standing.

Mr. F. J. Horniman was known to anthropologists chiefly as the founder of the Horniman Museum at Forest Hill. A member also of the Zoological and Geographical Societies, he took a keen interest in science and the Institute hears of his death with sincere regret.

Mr. Coutts Trotter was elected in 1879. In his extended travels he had gained a remarkably wide knowledge of the greater part of Polynesia and of New Guinea, and was the author of several papers published in the Institute's Journal.

Fellows of the Institute will also regret the loss of the following travellers and men of science whose researches have done much to further the study of Anthropology.

Edouard Piette, the distinguished French Archæologist, died in June. His works, particularly those dealing with the caves at Mas-d'Azil and Brassempouy, are too well known to need recapitulation, but the Council wish to pay this tribute to the memory of one of the most eminent of European Archæologists.

Professor Ernst Forstemann, who died in November, was one of the earliest and most eminent of the students of the Maya language. Although he entered upon the study comparatively late in life, his loss will be severely felt by American Archæologists.

The death of Professor Hermann Obst, Director of the Ethnographical Museum in Leipzig, will be much regretted by Anthropologists. The sphere of his researches was wide, and included the study of archæology, physical anthropology and ethnography.

Anthropology has sustained the loss of another distinguished man of science in the person of Emil Schmidt. By profession a doctor, he turned naturally to the study of Physical Anthropology, but he also published valuable work on the prehistory of North America.

In Dr. Albert Voss, the Berlin Museum für Völkerkunde has lost the director of its archæological department. This post Dr. Voss had occupied with distinction since 1888, and he was the author of many valuable contributions to science.

Leon Vanderkindere, the eminent Belgian anthropologist and historian, died in November. His most important work was the colour census of Belgian school-children, in which he demonstrated the existence of the colour frontier, dividing the Flemings and Brabançons from the Walloons. He also published important contributions to archæology and history.

Professor Karl Futterer and the Rev. George Grenfell were both eminent chiefly in the field of Geography. At the same time the Council feels that it cannot pass over without mention the loss of these two distinguished pioneers in that science which is so closely connected with the study of man.

MEETINGS.

During the year ending December 31st, 1906, eleven ordinary meetings were held, in addition to one special meeting, the Huxley Memorial Lecture. At these, fifteen papers were read, twelve dealing with ethnographical subjects, and three with archæological, and five exhibitions of specimens were made. The average attendance shows a slight increase.

HUXLEY MEMORIAL LECTURE.

The seventh Huxley Memorial Lecture was delivered on November 1st, 1906, in the Theatre of Burlington House, by kind permission of the First Commissioner of Works. The lecturer, Professor W. M. Flinders Petrie, D.C.L., F.R.S., chose as the title of his lecture, "Migrations," and illustrated his discourse by numerous lantern slides. At the conclusion of the lecture the Institute's Huxley Memorial Medal was presented to the lecturer by the President.

PUBLICATIONS.

During the year two half-yearly parts of the *Journal* have been issued, viz., Vol. XXXV, 2 (July–December, 1905) and Vol. XXXVI, 1 (January–June, 1906). Of the former 95 copies have been sold, of the latter 76. Both of these numbers show an increase on those of last year. With regard to *Man*, twelve monthly parts have been issued as usual. The number of subscriptions received from Fellows is slightly less than for last year, but an increase in the total sum received from non-Fellows and from office sales shows that *Man* is gradually extending its sphere among the public at large.

The Council recommends that the present system of subscription be continued in force for another year.

A special edition of the Huxley Memorial Lecture was issued in monographic form at a price of 2*s.* 6*d.*

LIBRARY.

The accessions to the Library show a considerable increase on those recorded for 1905. In addition to this Dr. MacIver has been kind enough to deposit a number of works, relating chiefly to Africa, at the Institute for the use of Fellows.

The number of periodicals received in exchange for the *Journal* and *Man* has been increased by five units, four foreign and one colonial. The binding of current periodicals has received attention.

EXTERNAL.

Arrangements have been set on foot for a deputation to the Prime Minister on the subject of an Anthropometric Survey. The co-operation of a large number of eminent scientists has been promised, and it is expected that the deputation will be received at the beginning of the next session of Parliament.

ASSUMPTION OF THE TITLE "ROYAL."

The Council reports that it has debated at considerable length the advisability of applying for permission to assume the title "Royal Anthropological Institute of Great Britain and Ireland." It has been resolved shortly to convene a general meeting of the Institute to obtain the consent of Fellows to this measure.

ANTHROPOLOGICAL INSTITUTE OF

Receipts and Payments

RECEIPTS.	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*
Balances in hand, January 1st, 1906:—									
Cash in Bank	122	8	6						
Cash in Hand	29	6	6						
Petty Cash	1	5	9						
				153	0	9			
Less Balances owed as per 1905 Account:—									
Library Fund	17	3	4						
"Notes and Queries"	51	14	5						
				68	17	9			
							84	3	0
Subscriptions:—									
Six Life Subscriptions				126	0	0			
Ordinary				499	16	0			
Arrears				39	15	9			
Advance				27	6	0			
							692	17	9
Sale of Journals				152	14	11			
Sale of Huxley Lectures				5	19	9			
							158	14	8
"**Man**"							99	19	5
Advertisements in *Journal*							2	2	0
Dividends							12	7	8
Library Fund:—									
Balance, January 1st, 1906	17	3	4						
Grant	10	0	0						
				27	3	4			
Less Binding and Books	11	14	10						
Petty Cash	2	2	0						
				13	16	10			
							13	6	6
"**Notes and Queries**":—									
Balance				51	14	5			
Received, 1906				8	0	3			
							59	14	8
Hobley's "Uganda"							28	16	7
"**Physical Deterioration**"								2	6
Amount at Debit of Petty Cash							3	12	2
Sundries							9	2	6
							£1,164	19	5

To Balance Forward £191 8*s.* 2*d.*

January 10*th*, 1907.

GREAT BRITAIN AND IRELAND.

for the Year 1906.

PAYMENTS.	£	*s.*	*d.*	£	*s.*	*d.*
Rent				135	0	0
Journal	365	13	3			
Less refund	15	8	8			
				350	4	7
Advertising				5	19	0
"Man"				175	19	3
Salaries				119	15	0
Housekeeping				20	10	0
Stamps and Parcels				51	13	11
Printing and Stationery				35	10	11
Lantern				1	7	3
Grant to Library				10	0	0
Huxley Medal and Lecture				2	10	6
Hobley's "Uganda":—						
Balance	28	16	7			
Less Received 1906		8	0			
				28	8	7
"Physical Deterioration"				13	5	6
Insurance				1	10	0
Travelling Expenses				1	19	7
Sundries				19	17	2
Balance at Bank	161	16	10			
Cash in Hand	6	3	4			
Country cheques received but not paid till after 31st December ...	23	8	0			
				191	8	2
				£1,164	19	5

Examined and found correct.

(Signed) RANDALL H. PYE, F. W. RUDLER, } *Auditors.*

TREASURER'S REPORT FOR THE YEAR 1906.

On the 31st December, 1906, the assets of the Institute were as follows :—

	£	s.	d.	£	s.	d.
Assets (not immediately realisable) :—						
Books in Library, Publications, Furniture as per estimate of 1903 ...				885	0	0
Realisable Assets :—						
£300 Metropolitan Consolidated 3½ per cent. Stock, present value	306	0	0			
Arrears of subscriptions, £137 10*s.* 0*d.* valued at	61	18	0			
Balance at Bank	161	16	10			
Cash in Hand	6	3	4			
Country cheques (cashed after 31.12.06)	23	8	0			
				559	6	2
Total Assets				£1,444	6	2

Against which there are liabilities :—

	£	s.	d.	£	s.	d.
Anthropological *Notes and Queries* ...	59	14	8			
Library Fund	13	6	6			
				73	1	2
Leaving a surplus, if all our property were realised, of				£1,371	5	0

Considering only our immediately realisable assets :—

	£	s.	d.
These amount to	559	6	2
Less	73	1	2
That is	486	5	0

The state of ideal solvency also implies, as in my last report, the following additional liabilities :—

	£	s.	d.
Journal (1906)	250	0	0
Man (December, 1906)	12	10	0
Unexpended life subscriptions	439	0	0
Total	£701	10	0
Our immediately available Reserve Fund is	486	5	0
Leaving a deficit in the Reserve Fund of	215	5	0

THE FINANCIAL POSITION OF THE INSTITUTE.

The financial progress of the Institute continues to be satisfactory. The total receipts this year are £107 odd in excess of last year's.

The receipts from ordinary subscriptions are £23 more than last year. This excess would have been greater if twenty-three members had not failed to pay their subscriptions last year. The receipts from six life subscriptions, amounting to £126, have helped in the reduction of the deficit in our Reserve Fund by £134 3*s.* 2*d.*

The receipts from the sale of the *Journal* and Huxley Lectures are £20 more than last year. The receipts from *Man* are £28 less than last year.

I regret to say that the arrears of subscriptions unpaid, namely, £137 10*s.* are considerably in excess of last year, but I have no doubt a considerable proportion of that sum will be recovered later on.

A record number of new members, namely forty-one, has been elected this year, and only twelve have been lost by resignation or death. This makes a nett increase of twenty-nine members, which means a considerable addition to the income of the Institute. If the membership continues to increase at this rate, the financial position of the Institute is assured, and there will be considerable funds available to carry out several little enterprises which have been hitherto postponed.

J. GRAY, *Hon. Treasurer.*

PRESIDENT'S ADDRESS.

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.

BY PROFESSOR WILLIAM GOWLAND, A.R.S.M., F.S.A., F.I.C.

[WITH PLATES I–VIII.]

WE have but little exact knowledge of the mode in which the Japanese disposed of the bodies of their famous dead in the very earliest times. The somewhat vague statements of their ancient traditionary records would seem to point to burial or mere deposition on the summits of natural hills as their earliest practice, but the most ancient remains yet discovered have not been found in such localities, but on the lower grounds bordering the plains, and on the plains themselves. These remains, which consist of bronze swords and arrowheads, personal ornaments of steatite, jasper, rock crystal, and other stones, and along with which no objects of iron occur, are generally found at but slight depths below the surface of the ground. It is impossible to say with absolute certainty whether they had or had not been originally covered with mounds of earth. If they had been so covered and the mounds were of only small dimensions, the action of long weathering or the agricultural operations of bygone ages would have amply sufficed to level and destroy them. The mass of evidence is in favour of the belief that low mounds had been erected over them and that the Japanese were a race of mound builders in very early times indeed.

In China, mound-burial was practised at a very remote period, and, although implicit credence cannot be altogether given to the specific statements of the early writers relating to this matter, yet broadly considered their testimony doubtless contains some elements of truth. The first burial mound of which they give a record is the tomb of Hia How Kao, the date assigned to it being 1848 B.C.[1] Several others, which I need not specify, of later centuries B.C. are also mentioned; but, apart from these records, we have very weighty evidence in favour of the extreme antiquity of mound-burial in that country in the use of the ideograph 陵 *ling*, Jap. reading *ryō*, from very remote times to denote a burial mound, its original proper meaning being a high mount or peak. As the civilisation of China, even during these times, was probably not without influence on the tribes beyond its frontiers, it is not impossible that the Japanese may have been mound builders before they migrated from their old home on the mainland. Whether this supposition may be correct or not, it is certain that the race practised mound burial, especially in the western parts of the islands they now occupy, several centuries before our era.

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[1] "On the Stone Figures at Chinese Tombs and the Offering of Living Sacrifices." By W. F. Mayers. *Proc. N. China Branch of the Asiatic Society.* March, 1878.

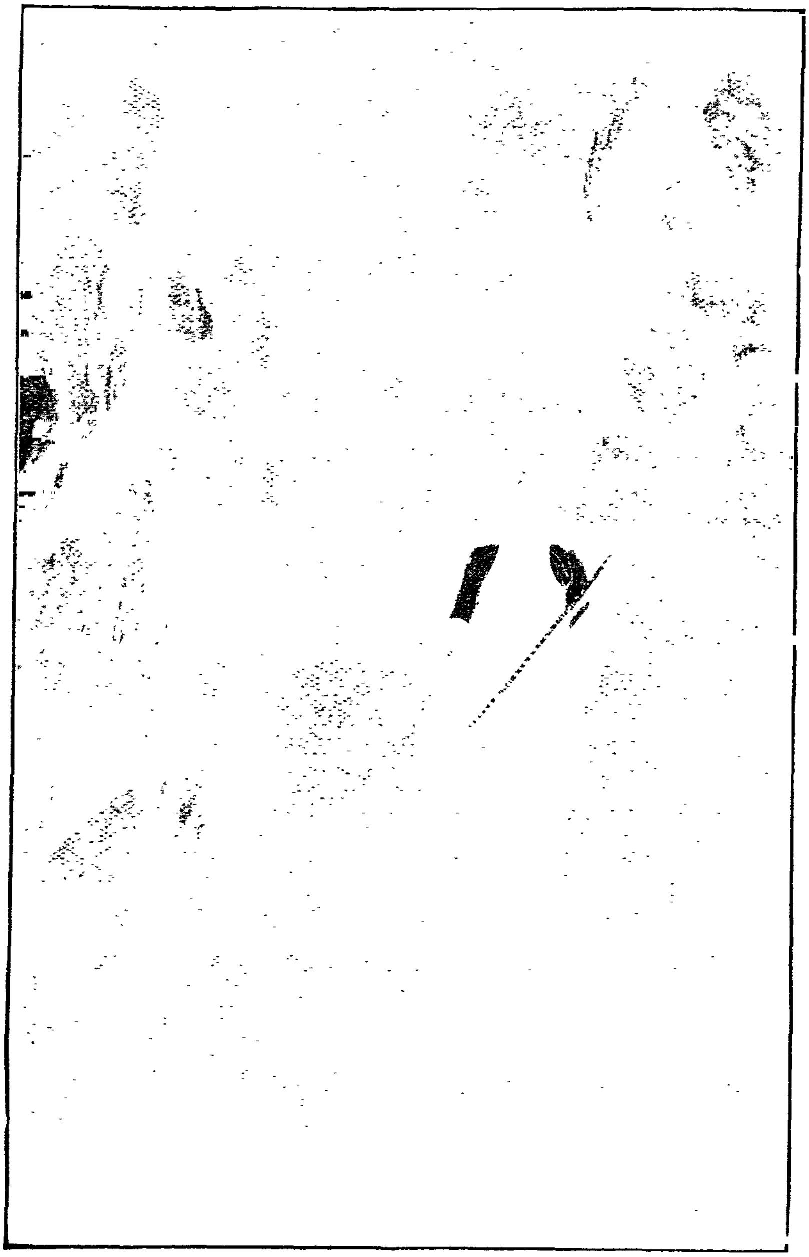

FIG. 1.—INTERIOR OF DOLMEN AT TSUKAHARA (SETTSU).

(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

That the simple mounds preceded those that contain a rude stone chamber, which we call a dolmen,[1] is also not open to doubt, for associated with them we find the rudest hand-made pottery, and neither this pottery nor the swords of bronze previously mentioned have ever been discovered in dolmens. Stone beads and ornaments and sometimes bronze arrow-heads are, however, found in dolmens, but then they occur along with weapons and objects of iron and beads of glass. The period of the dolmens is thus a continuation of that of the simple mounds. During the dolmen period, and certainly after it, the building of simple mounds still survived, but sarcophagi of wood, stone or terra-cotta, of which there are no traces in those of the earliest date, were then used in the burials.

Excepting the earliest mounds, all others enclose either dolmens or sarcophagi. Those containing dolmens are generally older than those containing sarcophagi; there are, however, several examples in which both classes are undoubtedly contemporaneous.

Burial mounds containing dolmens are very numerous in Japan, many hundreds are known to me. Of these I have carefully examined over four hundred. A detailed account of their various forms, distribution and contents will be found in *Archæologia*, vol. lv, p. 439 *et seq.*[2]

All dolmens, with one or two exceptions of late date, are constructed of rude unhewn blocks, often weathered boulders just as taken from the mountain sides; but in some localities where there is an outcrop of suitable rock, some of the stones seem to have been roughly quarried. A view of the interior of a typical dolmen is given in Fig. 1, and the exterior of a mound in Plate I.

Usually the dolmen is covered by a simple conical, circular, or somewhat elongated, mound; the mounds, however, with which we are specially concerned in this paper are of an entirely different form.

They are generally known as *misasagi* or imperial burial mounds, and are of more than usual interest, as, so far as my knowledge goes, they are peculiar to Japan.

From their form they may be not inaccurately termed "double" mounds although they never contain more than one dolmen. Fig. 2, which is drawn from my surveys, represents a typical one in the neighbourhood of Nara (Yamato). Although it is of considerable size it is not one of the largest, yet I have selected it for description as it is in a better state of preservation than any others I have seen, and besides I was able to go upon it and make careful measurements—as it had not, until I called attention to it, received official recognition as an imperial tomb, whereas in other cases this was prohibited, and I had then to make my observations from outside the moats.

As seen in plan, Fig. 2, it appears to consist of a circular mound combined with another intermediate in form between a triangle and a square. But as there are no triangular mounds in Japan, and no symbolic use of the triangle until comparatively late times, I think, the form may be regarded as a combination of a circular with a square mound. This curious shape is doubtless not without symbolic meaning, yet Japanese archæologists have not been able to give any satisfactory interpretation of it.

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[1] The term "dolmen" is used in this paper in its broad or generic sense, and signifies a stone burial chamber, generally of rude megalithic structure, larger than a cist, covered by a mound.

[2] Gowland, *The Dolmens and Burial Mounds in Japan.*

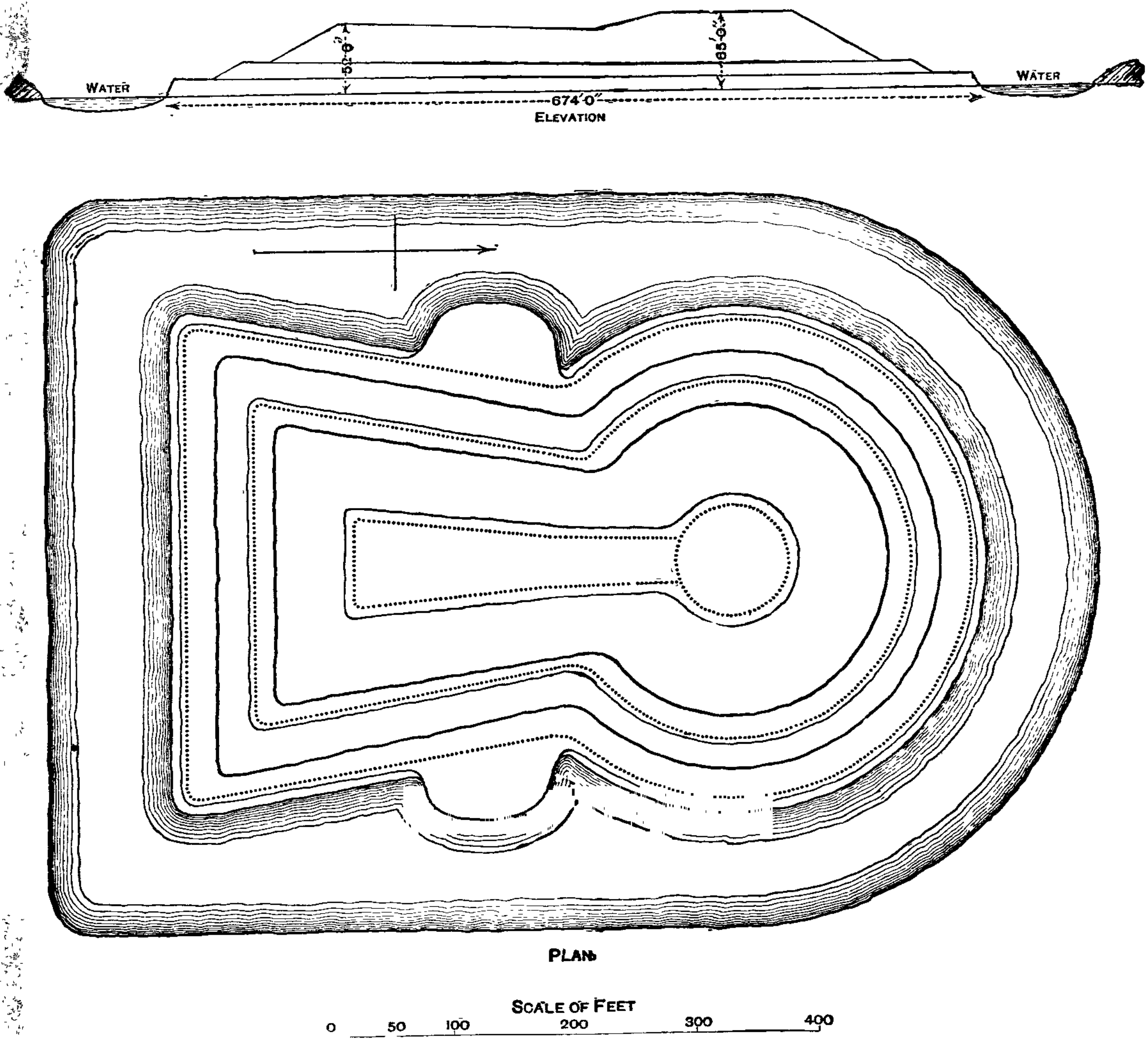

FIG. 2.—DOUBLE MOUND NEAR NARA (YAMATO).

(The dotted lines on the plan represent the positions of the rows of Terra-cotta Tubes.)

(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

The circular end rises in the form of a truncated cone forming a flat peak 113 feet in diameter at its summit, and this is always the highest part of these mounds. The square end, on the other hand, has no distinct peak, its summit being an inclined plane, also flat, about 215 feet long, rising at a gentle angle from the inner slope of the conical peak, and terminating in a long, straight edge, 90 feet long, at right angles to the middle line of the mound.

Some of these mounds, especially when seen from a distance, appear to have two peaks, and from this feature the name "futa-go-yama" or twin hills[1] has been applied to them, but on examining them closely I have always found that there was only one original peak, and that the other had been formed by the excessive weathering of the narrower part of the square end.

The word 皇陵 *Misasagi* or *Teiryō*, is often applied to them as a specific name, but this is not strictly correct, as its meaning is merely "imperial mausoleum," and in that sense is used for all imperial tombs of whatever form, whether they are double or simple mounds.[1]

The burial, whether in a dolmen or sarcophagus, invariably took place in the circular end of the mound. In the square end no remains of any interment have ever been found, but on its surface fragments of ceremonial vessels sometimes occur, indicating that some of the funeral or subsequent rites were celebrated there.

The chief dimensions of this mound are:—

Total length of base	674	feet.
Extreme length of square end	425	„
Diameter of round end	420	„
Height of conical peak	65	„
Height of terminal edge of square end	52½	„

The exact relative proportions which these measurements bear one to another differ in nearly every one of these double mounds, but the proportions of length and breadth generally range from 1·42 : 1 to 1·58 : 1.

These mounds have usually terraced sides. In the example shown in the diagram there are two well-formed terraces completely encircling it. In some smaller mounds there is only one terrace or none, but in those of the largest size there are often three. At the re-entering angle on each side a projection about 55 feet broad, now generally of irregular form, but probably originally semicircular, extends from the lowest terrace into the moat, and upon this there is generally a low, circular mound.

The moat has an average breadth of 100 feet, and completely surrounds the mound. Nearly all these double mounds possess a wide moat, although some, from their position on sloping ground, are not surrounded by one. Others, as the huge mound of the Emperor Nintoku, in Izumi, and another, also of vast size, near Fujiidera (Kawachi), had two moats encircling them. Around the outer embankment of the moat of several of the larger mounds, small conical mounds are ranged at varying distances apart.

A curious feature which they all possess is the rows of terra-cotta tubes termed "*haniwa*," with which the borders of their summits, terraces and moats, are lined. One of these tubes is represented in Fig. 3. It is 1 foot 1 inch to 1 foot 3 inches in diameter, 1 foot 5 inches long, and ½ to ¾ inch thick, and is strengthened by three horizontal ridges encircling it. Two holes 2 inches in diameter are pierced in it opposite each other near its middle.

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[1] Other names by which they are popularly known are:
Hyōtan-yama =Hill resembling a bottle gourd.
Samisen-dzuka=Mound of the shape of a Japanese lute.
Cha-usu-yama =Hill of the shape of a mill for grinding tea.

In each row these tubes are set upright from 3 to 6 inches apart, and are almost completely buried in the earth, about an inch or so only being exposed. On this mound the row which encircles the entire summit is 8 feet, that on the upper terrace only 4 feet from the edge. On the lower terrace the tubes are exposed, and are being washed away by the water of the moat (Fig. 4).

The total length of the rows on this mound, if placed in a straight line, would exceed 1⅓ miles, whilst the number of tubes at the lowest computation is not less than 4,740, exclusive of those on the embankment of the moat.

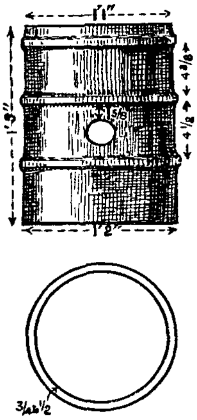

FIG. 3.—HANIWA. TERRA-COTTA TUBE.

It is difficult to determine, with absolute certainty, the exact intention of the early Japanese in using these rows of terra-cotta tubes. It may be that they were placed in the positions we have seen for structural reasons, to aid in preserving the form of the summit and terraces of the mound and

FIG. 4.—TERRA-COTTA TUBES ON THE LOWER TERRACE OF AN IMPERIAL MOUND, NARA (YAMATO).

the embankment of the moat from being destroyed by weathering, but, if so, it is not obvious why they were ever buried as far as 8 feet from the edge they were intended to protect.

On the other hand they may have been intended to represent the retainers, who, in earlier times, were immolated on the mound, but to this it may be objected that they would then have borne at least some rough resemblance to the human form, or some indications that they represented it. They occur, too, on mounds upon which rude terra-cotta human figures have been found along with them Possibly there may be some truth in both suppositions.

Opposite the square end and on the outer embankment of the moats of these imperial burial mounds is the "kakusaku" or sacred enclosure, where offerings are made to the *manes* of the deceased emperor on the anniversary of his death. This will be described later when describing the *misasagi* of the Emperor Keitai.

Frequent mention occurs in Japanese literature of the ancient custom of burying human beings and horses at the tombs of members of the imperial family and of chieftains. The most important passages are in the *Nihongi.*[1]

(2 B.C.) "28th year, Winter, 10th month, 5th year. Yamato-hiko no Mikoto, the Emperor's younger brother by the mother's side, died. 11th month, 2nd day. Yamato-hiko was buried at Tsukizaka in Musa. Thereupon his personal attendants were assembled, and were all buried alive upright in the precinct of the misasagi. For several days they died not, but wept and wailed day and night. At last they died and rotted. Dogs and crows gathered and ate them."

"The Emperor Suinin, hearing the sound of their weeping and wailing, was grieved in heart, and commanded his high officers, saying: 'It is a very painful thing to force those whom one has loved in life to follow him in death. Though it be an ancient custom, why follow it if it is bad? From this time forward take council, so as to put a stop to the following of the dead."

(A.D. 3.) "32nd year, Autumn, 7th month, 6th day. The Empress Hibasu-hime no Mikoto died. Some time before the burial, the Emperor commanded his ministers, saying: 'We have already recognised that the practice of following the dead is not good. What should now be done in performing this burial?' Thereupon Nomi no Sukune came forward and said: 'It is not good to bury living men upright at the tumulus of a prince. How can such a practice be handed down to posterity? I beg leave to propose an expedient which I will submit to your Majesty.' So he sent messengers to summon up from the Land of Idzumo a hundred men of the clay workers Be. He himself directed the men of the clay workers Be to take clay and form therewith shapes of men, horses, and various objects which he presented to the Emperor, saying: 'Henceforward let it be the law for future ages to substitute things of clay for living men, and to set them up at tumuli.' Then the Emperor was greatly rejoiced, and commended Nomi no

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[1] Nihongi. *Chronicles of Japan from the Earliest Times to* A.D. 697. Completed, A.D. 720. Translation by W. G. Aston, C.M.G., vol. i, pp. 178–181.

Sukune, saying: 'Thy expedient hath greatly pleased our heart.' So the things of clay were first set up at the tomb of Hib asu-hime no Mikoto. And a name was given to those clay objects. They were called Hani-wa (clay rings). Another name is Tatemono (things set up).

"Then a decree was issued, saying: 'Henceforth these clay figures must be set up at tumuli: let not men be harmed.'

"The Emperor bountifully rewarded Nomi-no-Sukune for this service, and also bestowed on him a kneading place, and appointed him to the official charge of the clay workers Be."[1]

The following examples of these customs as practised in China, are given by Mayers in the paper already referred to.

678 B.C. Human beings were first slain at the grave of the deceased sovereign Wu Kung. The number was 66.

621 B.C. At the death of Emperor Muh Kung 177 were slain.

210 B.C. At the death of Emperor She Kwang-ti, concubines who had borne no children, and others were put to death.

No other later instances are given, but it is recorded that "at the tomb of Hoh Kü-ping (117 B.C.), stone figures of men and horses were arrayed."

In the province of Yamato, after these sacrifices had ceased, there was for some time a pretence of immolating victims. They were shut up in the chamber of the mound with the dead, but an opening was left through which they might escape. These persons (termed *ombo*, "smoke vanishing") were, however, considered to be dead, and had to live in districts specially set apart for them.

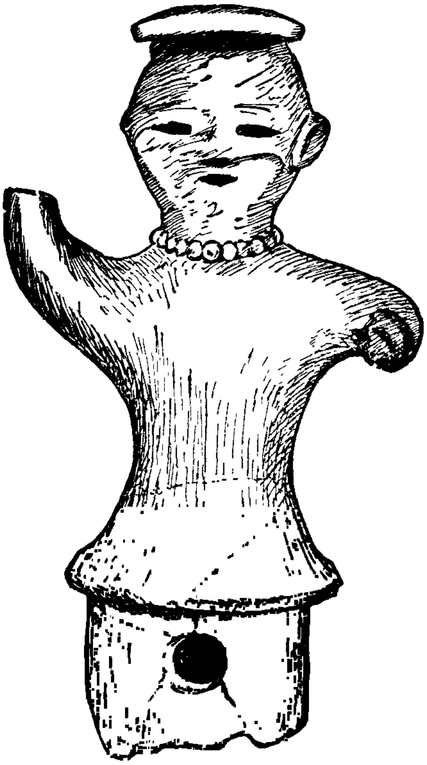

FIG. 5.—TERRA-COTTA FEMALE FIGURE. (*Tsuchi-ningyō*). $\frac{1}{5}$ LINEAR.

(*Reproduced by the courtesy of the Council of the Society of Antiquaries.*)

The custodians of the burial mounds formed another grade of men who were similarly compelled to live apart from the ordinary people. They were termed "shiku." Both these grades usually carried on farming operations.

The figures set up on the ancient burial mounds are called by the Japanese "tsuchi ningyō," a term merely signifying clay images. They are, with rare exceptions, made of only lightly burnt terra-cotta, generally red in colour. Owing to the perishable nature of this material when exposed to the action of the weather, they would be rapidly destroyed as long as they stood above the ground, and only when by chance they were overturned and became covered with earth, was there any possibility of their preservation, hence but few have survived, and most of these are in a fragmentary condition. Unfortunately no records have been kept of the positions in which the existing specimens were found, but there is not the least doubt, judging from the forms of their pedestals, that they were set up above the surface of the mound and not buried within it. My own opinion, which is based on the position in which I found a pedestal on a large mound of imperial form, and numerous fragments of terra-cotta, not pieces of ordinary tubular *haniwa* on others, is that they were so set up around the level summit of circular mounds and of the round peak of the double mounds.

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[1] According to Mr. W. G. Aston, "the date ascribed to this incident cannot be depended on. At least, Chinese accounts speak of the custom of human sacrifices at the burial of a sovereign as in force in Japan so late as A.D. 247."

Fig. 5 represents one of these archaic figures from a mound in the province of Kozuke, which I was fortunate in being able to secure, and it is now in the British Museum. From the mode in which the hair is arranged, it is evidently intended to represent a woman; around the neck is a necklace of round beads. The pedestal is in the form of a tube resembling the *haniwa* previously mentioned, and like them is pierced with two holes through which, it is said, a bar of wood was fixed to assist in keeping the figure in an upright position on the mound.

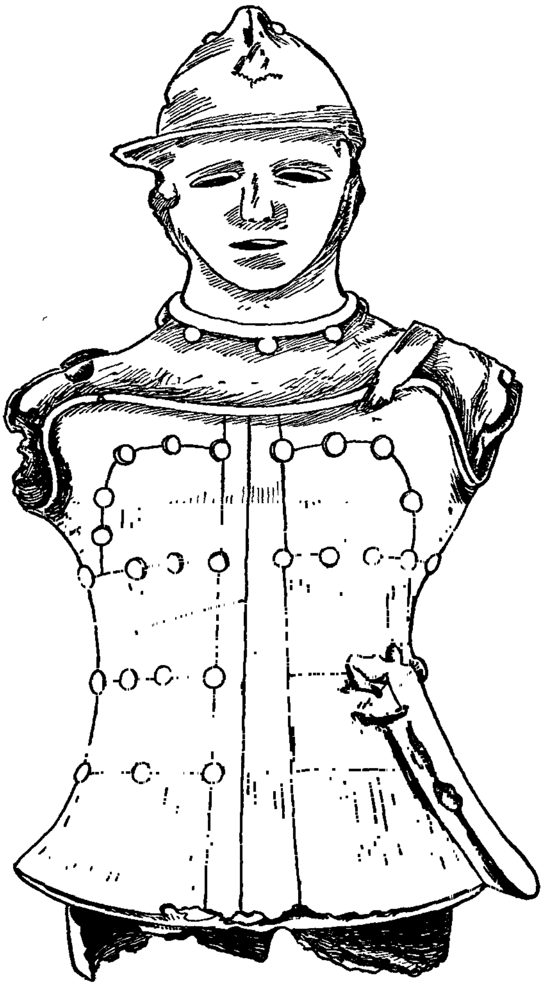

FIG. 6.—TERRA-COTTA MALE FIGURE (*Tsuchi-ningyō*). $\frac{1}{5}$ LINEAR.

(*Reproduced by the courtesy of the Council of the Society of Antiquaries.*)

In Fig. 6 is illustrated a male figure wearing a helmet, also a curious necklace of the curved ornaments, *magatama*, cylindrical beads alternating, which seems to have been worn only by men. Terra-cotta figures of horses were also frequently set up along with the human figures.

Stone figures, called *hayato*, are even rarer than those of terra-cotta; it would hence seem that they had never been extensively used

One from the province of Chikugo, now in the Imperial Museum, Tokyo, is shown in Fig. 7. It is a flat slab 3 feet in height (including the pedestal), 6½ to 7 inches thick, roughly hewn to represent a man wearing a short sword. On the back are perpendicular incised lines which are supposed by some to represent arrows. The mound from which it was taken is one of the double form, and formerly contained a dolmen but now all the stones are gone.[1]

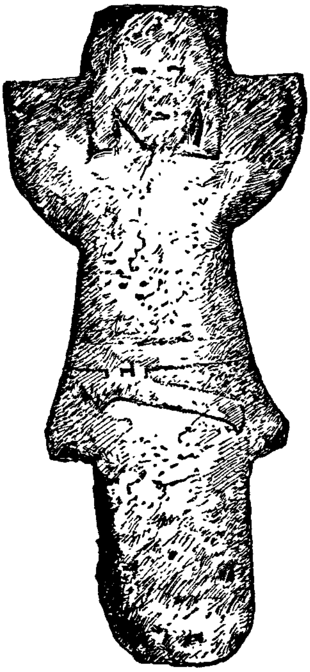

FIG. 7.—STONE FIGURE FROM A DOLMEN MOUND.

(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

A curious form in which these guardians of the tomb are represented is shown in Fig. 8, which is a print of a rubbing of one of three rude stones, each of which has incised on its surface, in boldly cut lines, a rude drawing of a human figure with the head of a hare. This stone measures 4·1 × 1·6 × 1·0 feet, and its sides are not hewn but weathered. The others are much smaller. They were found on the top of a burial mound, near Nara, attributed to the Empress Gemmyo, who died in A.D. 721, and near them was also unearthed a hewn stone slab bearing an inscription and the above date.

When I saw them they were in the temple Todaiji (Nara), and were labelled *Hayato*, which signifies "Imperial guard."

The largest double mounds are situated in the provinces of Izumi, Kawachi, and Yamato, but many others of imposing size I have also found in the provinces of Kozuke, Settsu, Hōki, Izumo, Yamashiro, Harima, Bizen, and Hyūga.

They vary in dimensions from a diminutive example in Hyuga, only 125 feet long and 18 feet high, to the stupendous piles officially recognised as the tombs of the Emperors Nintoku and Richū in Izumi, and Ōjin in Kawachi, none of which are less than 1,200 feet in length and 60 feet in height. That of Nintoku is specially noteworthy for its vast extent, being about 90 feet high, and with its two moats covering about 80 acres of ground.

The manner in which the dead were disposed in these double mounds is by no means uniform. Some do not contain a megalithic dolmen, but only a sarcophagus of stone or wood not very deeply buried in the round peak. This I have found in some cases surrounded with a low wall of stones, over which larger slabs were laid; in others these walls are wanting, and huge boulders then seem to have been simply placed over the coffin.

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[1] In the Shaku Nihongi (written in the thirteenth century), it is stated that there were many other figures of men and animals on this mound.

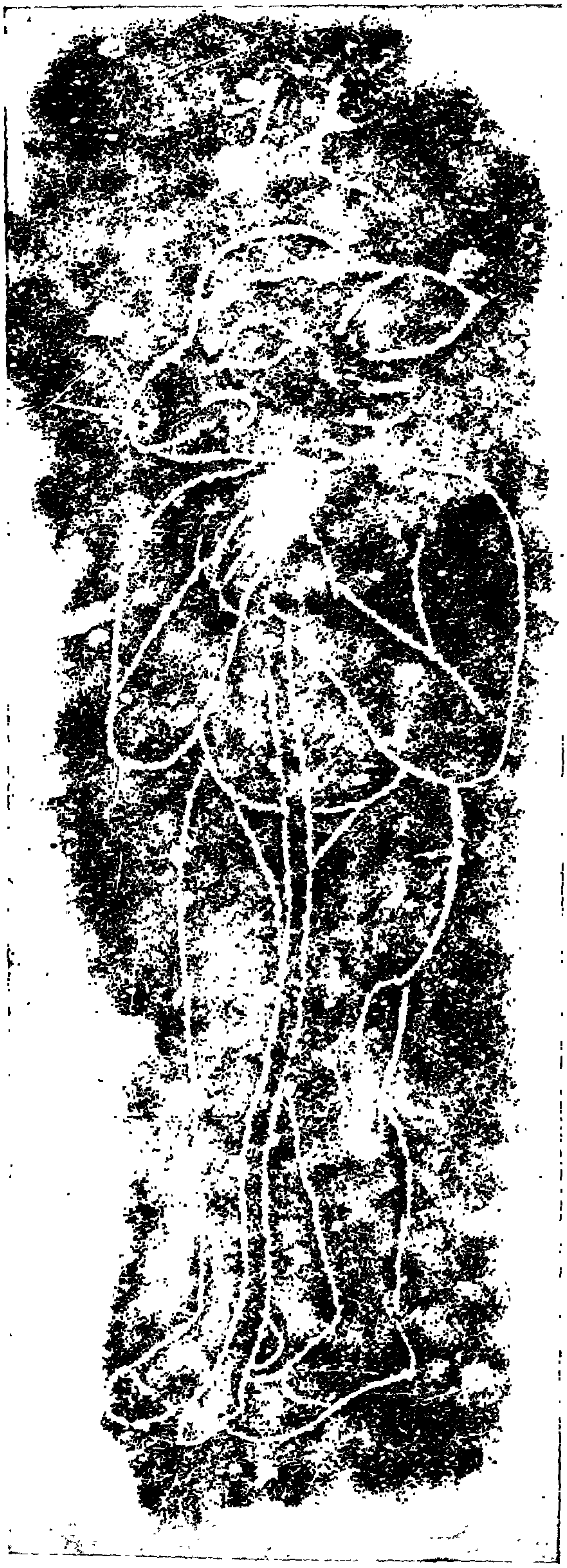

FIG. 8.—HAYATO.
From a Burial mound attributed to the Empress Gemmyo.
(*From a rubbing.*)

One of the largest and most noteworthy of these double mounds containing a dolmen, is situated in the village of Mise, in the most classic region of the province of Yamato. The vast proportions of this mound, and the magnitude of the dolmen within it, exemplify well the importance which the ancient Japanese attached to the sepulture of their illustrious dead. With the exception of the circular mound which forms its eastern peak, it is covered with terraced fields and part of the village. When first erected it cannot have been less than 1,000 feet long and 600 feet broad, although now it is slightly smaller, and the peak is 84 feet high.

A little to the south of Unebiyama, around the villages Mise, Myohoji and Koshi, is the most important dolmen region in the province. Although now the number of dolmens is but few, yet three of these are amongst the most remarkable in Japan, whilst everywhere ruined mounds and piles of broken stones mark the sites of scores of others, some of which were destroyed to furnish stones for the modern mausoleum of the Emperor Jimmu.

Fig. 9 represents the mound in longitudinal and transverse sections, showing the position of the dolmen within it. These bring very forcibly before us the comparative insignificance of the burial chamber when contrasted with the vast dimensions of the mound.

The mound which is also shown in Plate II is much dilapidated. Its sides and summit have long been under cultivation, and are clothed with terraced barley fields, excepting a portion at its eastern end, where a grove covers an irregularly rounded mound, which originally formed its peak. Yet on account of its vast size agricultural operations have failed to destroy the chief features of its original form—a double mound of the imperial type with four terraces. The moat has been almost completely absorbed by the surrounding fields so that its width cannot be ascertained.

The dolmen, it will be seen, is situated below the round peak, and lies within the mound at right angles to its long axis; its entrance, which faces south 10° west, being almost on a level with the second terrace. The gallery leading to the chamber is about 60 feet long, about 8 to 10 feet high, and varies in breadth from 4 to 8 feet. Its roof consists of six huge undressed stones, one of which is 16 feet in length. Its walls are built of similar cyclopean blocks of somewhat smaller size, and all are of the rudest irregular forms without any trace of tool marks. Its floor slopes gradually inwards. I was, unfortunately, able to penetrate only about 40 feet into this dolmen, when I was stopped by water and mud, which had accumulated to a depth of about 4 feet further in, so that I did not reach the chamber, but, so far as I could see it, its structure is the same as the gallery. It contains two stone sarcophagi. Part of the cover of one of these—that placed longitudinally near the middle of the chamber—was just visible above the water. It is of the usual form and size, well hewn, and with projecting lugs. The other sarcophagus, which is placed transversely near the back wall, was not seen, being covered with water. I made two other special journeys to this dolmen during periods of drought, but on neither occasion had the water diminished.

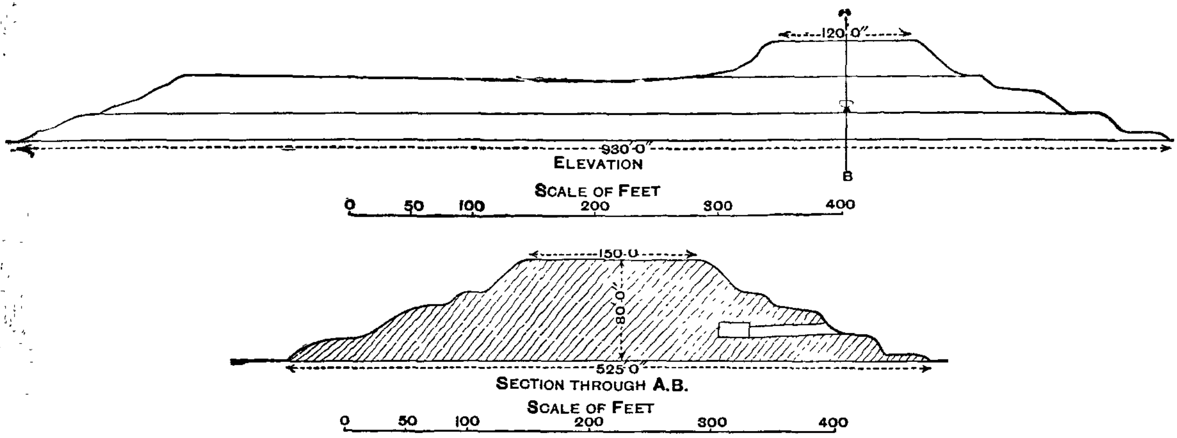

FIG. 9.—DOUBLE MOUND AT MISE YAMATO)

In the elevation the entrance of the dolmen is seen in the side of the mound below the peak.
The transverse section shows the position of the dolmen within the mound.

(*Reproduced by the courtesy of the Council of the Society of Antiquaries.*)

I am hence compelled to rely for the dimensions of the chamber on the figures given in the *Sei Seki Dzu Shi*, a Japanese archæological work, dealing chiefly with the imperial burial mounds, and published in 1853. In this book it is stated that the length of this chamber is 24 feet, breadth 18 feet, and that its roof consists of three stones. These measurements must be received with some reserve, but the chamber is certainly a large one. According to the author of this book, the dolmen is the tomb of the Emperor Mommu (died A.D. 686) and the Empress Jito (died A.D. 702), but there are no grounds whatever for such an attribution. It is, undoubtedly, an imperial mound, although it is not officially recognised as one by the Imperial Board of Ceremonies at the present time, and the extensive cultivated fields which cover it show that this non-recognition dates from at least a century or two ago. The reasons for its rejection from the official list of the burial mounds of emperors or princes is impossible to conjecture, and especially so when we find so many puny and insignificant mounds are included in it. When we consider that this mound is exceeded in magnitude by only two others—and these are those of the famous Emperors Nintoku and Ōjin—that the dolmen it contains is the largest in the country, and is, besides, unequalled as a specimen of megalithic structure, I think we cannot avoid arriving at the conclusion that it is, without doubt, the tomb of an emperor, and from the rude, undressed blocks of its dolmen —a very early one—one of the many of whose lives the ancient books, the " Kojiki " and "Nihongi," contain no record; whose very names are unknown.

The smallest double mound which I have found containing a large chamber is one of a rather extensive group of dolmens with simple mounds which is scattered over the lower slopes of Mount Kazuraki, near the village of Teraguchi (Yamato). The mound is 167 feet long and 32 feet high. The dolmen[1] is the largest in the group, and both gallery and chamber are of rude megalithic structure.

That these large double mounds are the tombs of men of imperial rank of pre-eminent power is, I think, not open to doubt. Their vast bulk implies the labour of many hundreds of men for a considerable time for their construction, and this only a chief or supreme ruler could command. According to Japanese archæologists the earliest is the tomb of the Emperor Annei (*c.* fourth century A.C.), and the latest that of the Emperor Bidatsu (died A.D. 585). Whilst not accepting the strict accuracy of these dates, there seems to be no reason to doubt that several are as early as one or two centuries or more before our era, and that they continued to be built for five or six centuries after it. During this range in time nearly all the emperors whose names are recorded in the *Kojiki*, and many whose names and existence have been forgotten, were buried in these double mounds in the central provinces, but I have also found these mounds of imperial form in the important dolmen districts of Izumo, Hoki, Bizen, Kozuke and Hiuga which are remote from the central provinces, the seats of the above recognised emperors. This would seem to indicate that these regions were once independent centres or were governed by chiefs who were regarded as equals with the central ruling family.

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[1] *Archæologia*, lv. 520, Tab. 1, No. 123.

According to the statements of Japanese records the care of the imperial tombs was entrusted to special resident officers from very early times, a custom surviving at the present day. But the appointment of custodians was frequently discontinued, sometimes for a considerable time; the mounds were then neglected and their sanctity was disregarded, and it is probably owing to this that many are now under cultivation, and with numerous others, are not recognised as imperial tombs. Yet, notwithstanding these breaks in the regular succession of custodians, it is not unreasonable to suppose that the most important mounds, those which from their imposing size form such conspicuous objects on the plains, would not altogether lose the early traditions attached to them, and would at least retain the names of the

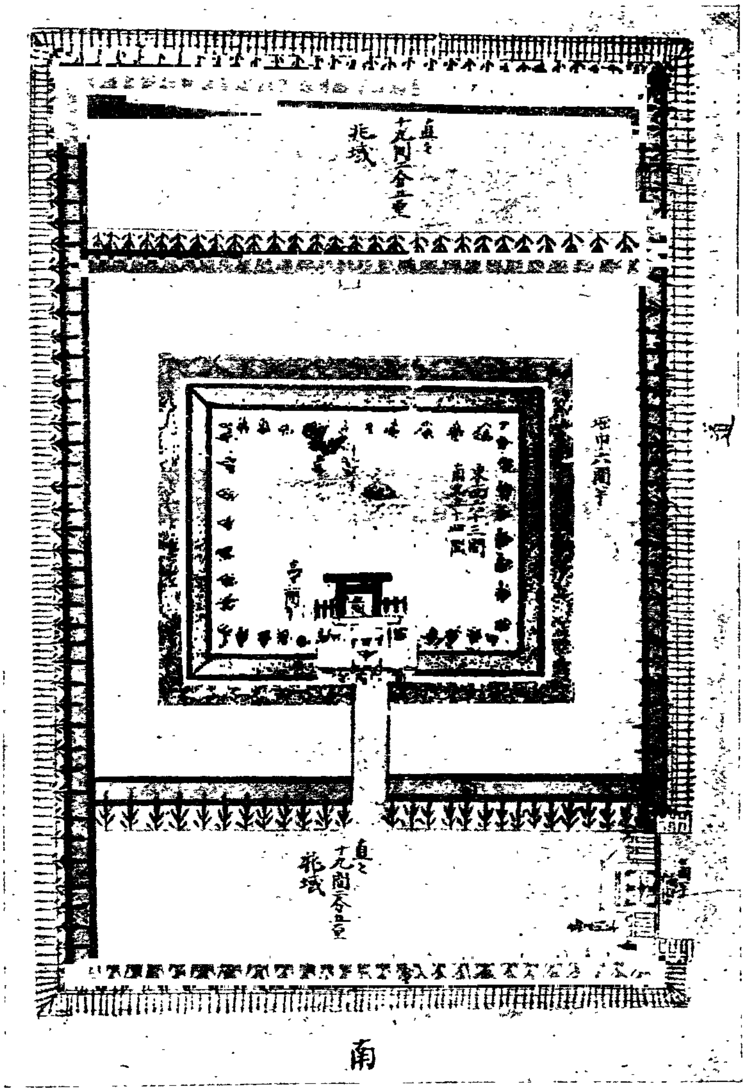

FIG. 10.—MISASAGI OF THE EMPEROR JIMMU.
(From a Japanese drawing.)

emperors whose tombs these traditions indicated them to be. If any reliance may be placed on this supposition, then the enormous mounds of Nintoku, Richū and Ōjin may be considered to be the tombs of the emperors whose names they bear, although in the great majority of lesser magnitude the attribution will be doubtful. From this it follows that the building of double mounds reached its zenith about the fourth century of our era.

Before proceeding to deal further with typical *misasagi* of the double mound form, I will enter into a brief consideration of the *misasagi* or imperial mausoleum of the Emperor Jimmu, the founder of the Imperial dynasty.[1]

At the foot of the northern side of Mount Unebi, in the province of Yamato, a mound of insignificant size but a few feet in height and diameter, one of a small scattered group, had been long pointed out by tradition as the *misasagi* or burial mound of the Emperor Jimmu, the founder of the Imperial dynasty.

Shortly after the fall of the Shogunate it was recognised as such by the government, and was surrounded with a moat and embankment together with a large tract of the ground around it.

The present emperor visited the *misasagi* on April 3rd, 1877, the anniversary of the death of Jimmu, and was present at the celebration of the annual ceremonies held before it.

It is curious to note that the mound attributed to the first Emperor Jimmu is situated not on Mount Unebi but on the plain at its foot; yet, according to the old traditionary records, the earliest emperors were all interred on the summits or brows of natural hills.

The *misasagi* is of little archæological importance as its construction differs entirely from any of the ancient mausolea. It is difficult to conjecture the grounds on which its form was decided, yet it is worthy of description as showing what is regarded by the government to be a fitting mausoleum for the first of the imperial line.

The *misasagi* is represented in Fig. 10, which is copied from a Japanese drawing. It consists of an inner square of level ground with sides 358 feet long, containing two low mounds, each about 18 feet in diameter and 2 feet to 3 feet high. It is enclosed by a low embankment and surrounded by a moat containing water. The mound attributed to the Emperor Jimmu is nearer the middle of the square than is shown in the figure. Neither mound is visible, even from the neighbouring slope of Mount Unebi, as the enclosure is thickly planted with trees. Outside the moat, on the north and also on the south side, a broad roadway runs from the east to the west sides of the *misasagi*, and the whole is enclosed by a turfed embankment surmounted by a fence of stone rails. The entire enclosure is rectangular, and measured along the stone fence is 871 yards in circuit.

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[1] It is recorded in the Kojiki that in the "76th year of his reign (585 B.C.), on the 11th day of the 3rd month, the Emperor Jimmu died in the palace of Kashiwa-bara. His age was then 127. The following year, autumn, the 12th day of the 9th month, he was buried in the *misasagi*, north-east of Mount Unebi."

The outer gate of the form usually found at all imperial tombs is shown by a broad line on the outer side of the embankment which crosses the moat.

On the other side of the moat is a wooden torii 18 feet high, and behind this another torii 12 feet high, constructed of stems of the tree *hinoki* (Thuya obtusa) from which the bark has not been removed. This kind of torii is said to be peculiar to this *misasagi*. On each side of the space between the torii is a stone lantern such as are seen at all *misasagi*.

On one of my visits (2nd April, 1888), I found a new wooden shed had been erected in the space between the two torii just mentioned for the annual ceremony of the 3rd, the date of the death of the emperor, when a representative of the Mikado[1] visits the tomb to make the customary offerings. This officer is called *Chokushi* or imperial ambassador, and, in addition to the offerings mentioned below presents a special offering from the Mikado, the nature of which I was unable to ascertain.

The offerings are made on eleven *sambo* (ceremonial stands of white wood), and consist of products of the sea, river, and mountain such as *tai* (serranus marginalis), carp, sea weed, salt, water, *sake* (rice beer), *mochi* (rice bread), horseradish, oranges, pheasants and wild ducks.

A ceremonial offering of *mochi* and *sake* at the outer gate by Shinto priests is illustrated in Plate III. Three *sambo*, bearing the offerings, are shown on the table in front of the officiating priest.

The public are allowed to go only as far as the gate on the outer side of the moat where they pay reverence to the tomb.

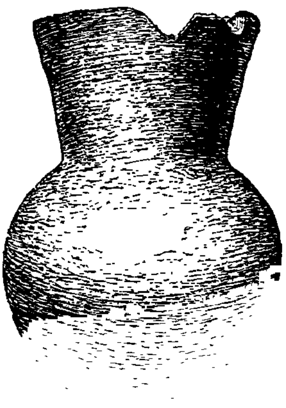

FIG. 11.—TERRA-COTTA VASE (HAND MADE). HEIGHT, 7½ INCHES.

(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

The most ancient Japanese pottery yet found are the rude vessels which were unearthed near the small tumuli of this *misasagi* whilst the present moat was being excavated. Fig. 11 represents one of these, now in the Gowland collection in the British Museum; others, not much different from it, are figured and described in the *Kwanko Dzusetsu*, by the late Japanese archæologist Ninagawa.

The *misasagi* which I now propose to describe is that of the Emperor Keitai who died in A.D. 531, as it is one of the best preserved of all the *misasagi* recognised by the Imperial Board of Ceremonies; we will then consider the most important of those of the earlier emperors in the central provinces; and afterwards some typical examples in other centres.

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[1] Mikado. Though this is the name by which the whole outer world knows the sovereign of Japan, it is not that now used in Japan itself, except in poetry and on great occasions. The word is one indicative of the highest respect, as it is but natural that the name used by the Japanese of old to designate their heaven-descended sovereign should be. The Japanese have got into the habit of calling their sovereign by such alien Chinese titles as Senshi, "the son of Heaven"; Sen-ō or Sennō, "the Heavenly Emperor"; Shujō, "the Supreme Master." His designation in the official translation of modern public documents into English is "Emperor." *Things Japanese.* Basil Hall Chamberlain, 1891, p. 291.

Keitai Tenno.—Born A.D. 450, reigned from 507–531. Residence at Tama ho (Yamato). The *misasagi* of this emperor is an excellent example of a well-preserved double mound, situated on the plain between Takatsuki and Ota in the province of Settsu. No natural eminence has been taken advantage of in building it, and this, together with the extensive embankments which still bound the moat on two sides, show that its erection must have been a work of great magnitude, although in this respect it falls far behind the enormous piles of Nintoku and Ōjin. It possesses for us, however, more than usual interest, as it is the last great example of the double mound period, which, beginning about one or two centuries B.C., reached its zenith during the reigns of Ojin and Nintoku and ended at the death of Yomei A.D. 587. Four emperors succeeding Keitai were interred in double mounds it is true; yet these are all of insignificant dimensions.

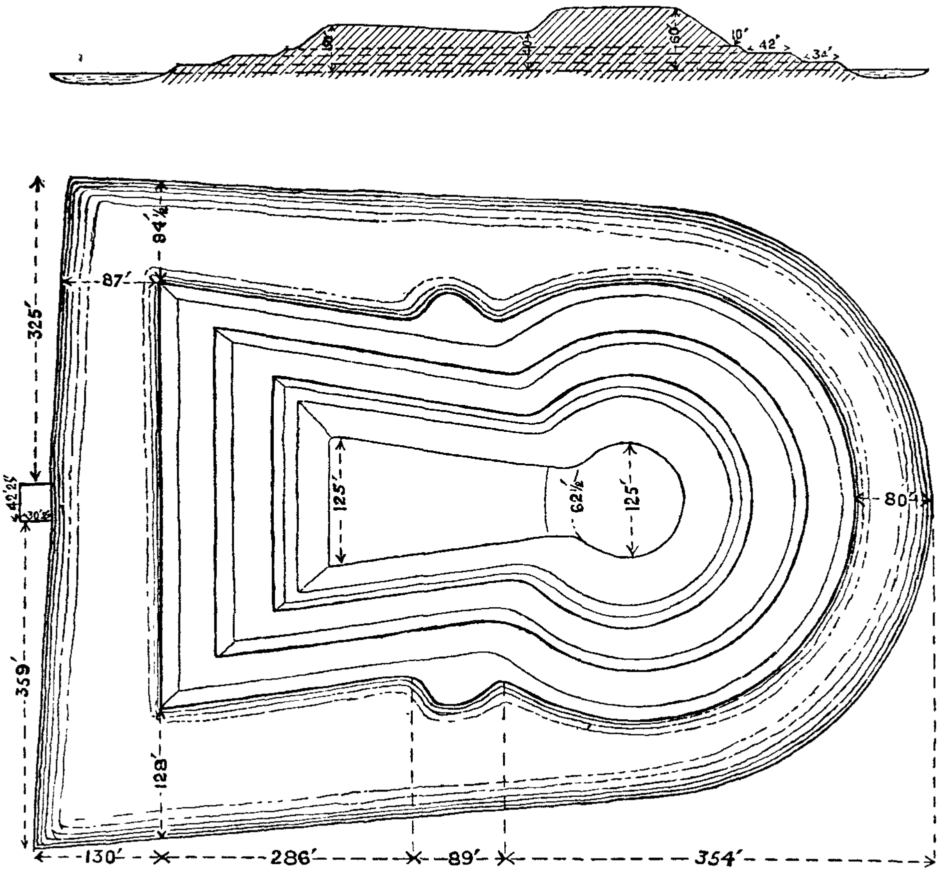

FIG. 12.—PLAN AND SECTION OF THE BURIAL MOUND OF THE EMPEROR KEITAI.

During later times the building of large double mounds appears to have been resumed, otherwise it is difficult to explain the occurrence of several both in

Yamato and Kawachi with sides, peaks and terraces so little weathered that they seem as if made but a century or two ago, yet no imperial name is attached to them.

The tumulus of the Emperor Keitai, Plate III, is a long terraced mound, the upper portion rising from the third terrace; this terrace, however, is insignificant in size and somewhat ill-defined compared with the two lower terraces.

The base of the mound measures 729 feet in length, 497 feet in breadth at its southern end which is straight, and 465 feet at its opposite and circular end.

Fig. 12, which is drawn from my survey, shows the mound in plan and section.

The moat varies in breadth from 80 feet to 130 feet. The height of the mound could not be satisfactorily measured, but its straight end is not less than 60 feet high above the level of the water in the moat. The top of the round end cannot be well seen as it is covered closely with trees. From the top of the straight end to the base of the round end is 235 feet. At the south end, the lowest terrace is about 34 feet broad and the succeeding one 42 feet.

There is a projection from the lower terrace in the re-entering curve of each long side. These projections are not distinct mounds although they are somewhat higher at the middle than at the sides.

The east bank of the moat has been much cut away, and cultivated fields extend to within a few yards of the moat. On the west side the ground has not been disturbed, and here fragments of *haniwa* occur, although none of the tubes can be seen *in situ.* On the north summit there are said to be three huge stones similar to those of dolmens.

A short distance from the embankment on the west side, nearly opposite the re-entering curve, there is a small circular mound with *haniwa* fragments scattered over it, and two other similar mounds occur near the north-west corner, and remains of several others are seen in the fields on the east.

The *kakusaku,* or sacred enclosure, shown in Plate IV is of the usual form. On its right is a stone granite pillar, *modern,* bearing the name of the emperor, and on the left the usual official notice board.[1] Its dimensions are as follows:—Breadth, 42 feet 2 inches; length, 30 feet 2 inches. The torii are each 1 foot in diameter. The front torii is 10 feet 0½ inch high from the stone lintel to the bottom of the top bar. Both torii are of round hewn timber, both uprights and cross bars.

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[1] Official inscription on the notice board at a *misasagi.*

August Tomb of the Emperor ....
East to West Ken ....
North to South Ken ....
(In some cases only the circuit is given.)

Regulations.

It is not permitted to enter here or to climb the mound.
It is not permitted to catch the fish or birds.
It is not permitted to cut down the trees or bamboos.

Date.

The above notification is to be strictly obeyed.

The fence consists of carefully-hewn wooden posts rising from a horizontal beam which rest on a foundation of one row of squared stones. Within the enclosure there are two stone lanterns, one on each side of the inner torii. The space within the enclosure and also in front of the gate is covered with sand or fine gravel and is kept carefully swept. Outside the gate the sand is carefully heaped into two conical mounds, one on each side, and when offerings are made here on the appointed days the sand is scattered over this space. The same small mounds of sand may be seen occasionally at the entrances of cremation grounds in the country.

Chuai Tenno's Misasagi. Pl. V.

Chuai Tenno, born A.D. 149, accession 192, died 200.2.6. Age 52. Residence, Kehi.

The *misasagi*,[1] Plate V, is situated at Fujüdera in Kawachi. It is a double mound surrounded by a moat. The embankment and the tumulus also have been recently repaired and put in order, so that the original shape of the former may have been slightly altered. The east side of the mound (Fig. 13) is more perfectly preserved than the west, the projection on the latter side being now almost shapeless. The measurements were hence made on the east side only.

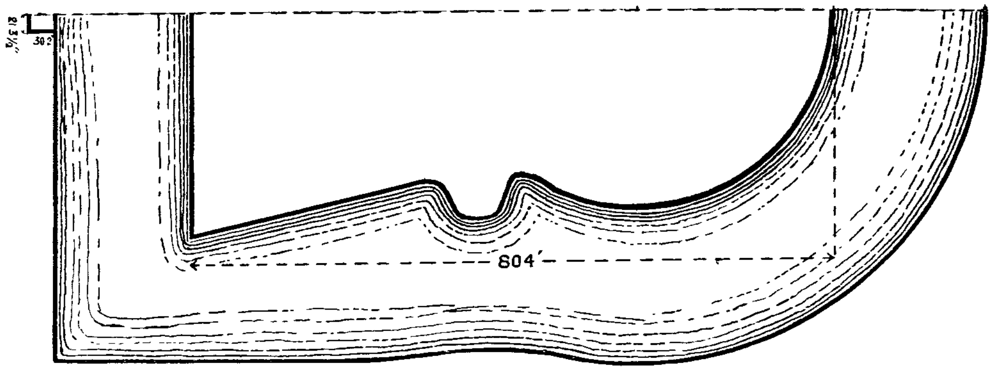

FIG. 13.—PLAN OF EAST HALF OF THE BURIAL MOUND OF THE EMPEROR CHUAI WITH ITS MOAT.

The *kakusaku* is placed on the embankment of the moat, almost opposite the middle of the square end of the end. It faces S. 20° W. The dimensions of the *kakusaku* enclosure are:—length, 30 feet 2 inches, and breadth, 42 feet 7 inches; gate, 8 feet 6 inches broad. On one visit the moat was almost empty of water, fragments of *haniwa*, of both red and a bluish colour, were then seen to be strewn along the bottom, both at the base of the tumulus and of the embankment. They were more numerous in the former position.

According to the official notice board, the *misasagi* measures 651 ken = 1,294 yards in circuit, along the embankment of the moat. The principal dimensions of the mound are:—

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[1] This *misasagi* was only determined to be that of Chuai about forty-four years ago when it was repaired.

	Feet.
Length of base	803
„ top	381
Breadth of base, square end	637½
„ „ round „	560
Height of round end about	70

The moat varies in breadth from 109–172 feet. The summit rises from the fourth terrace, which is unusual, most *misasagi* having not more than three terraces. The fourth terrace is, however, very indistinct in places, and may be of later date than the mound, and this, I think, extremely probable, as the summit both at the round and the square end is much less broad than we should expect to find in a *misasagi* of such large dimensions. The other terraces have also been much cut up for some reason which is not apparent.

The projections from the lower terrace, especially that on the east side, are seen to be not of the form of ordinary small round tumuli, but merely prolongations of the lowest terrace, rising about two feet or so from their sides to the middle, with a low rounded surface. Near it are the following mounds:—

A small round mound almost in front of the *kakusaku*, 40 yards distant, and two others.

A similar mound, on east side, in line with the moat at the square base and 150 feet from the embankment.

„ „ east side, opposite the curve, and 150 feet from the embankment.

„ „ west side, in line with the moat at the square base and 50 yards from the embankment.

A double „ with a moat, very small, lying east and west, about 200 yards north of the north end of the *misasagi*.

There may have been several other small mounds arranged around the outer embankment which have been levelled by the farmers, as cultivation extends quite up to the moat. None of these small mounds, which in Kawachi are ranged around the imperial tumuli, contain dolmens. They are generally simple mounds of earth. In one example near the *misasagi* of the Emperor Ingio, about 1½–2 miles distant, an earthen or clay coffin, containing weapons, ornaments, and vermilion, was found buried a few feet below its top. Around or near a *misasagi* in ancient times, there were, doubtless, buried the wives or concubines and the chief retainers of the emperor. When the *misasagi* was constructed the small mounds were perhaps made with it, during the lives of those who were, at their death, to be buried in them. And as the coffin is always but shallowly buried in the top of these mounds there would be no difficulty in subsequently using them for interments. Many which have been opened in the neighbourhood of the Kawachi *misasagi* have been found to contain nothing, others to contain weapons only and no bones, others to contain bones only and no weapons. The absence of bones in those cases where the sarcophagi were found to contain only weapons is not certain, as, in several cases known to me, the bones have disintegrated and fallen to powder, the enamel of the teeth alone being preserved, so that, unless they were very carefully looked for, they would escape observation.

The *misasagi* of the recognised emperors earlier than Chuai are so much weathered and dilapidated that they afford no useful measurements for the determination of their original size, I will therefore enter into a brief consideration of the most important of those of his successors. They are all of the type shown in Figs. 2, 12 and 13, so that only a short notice of each will suffice.

The first is the burial mound of the Empress Jingo to whom the conquest of Korea in the early years of the third century A.D., is attributed. The Empress died in A.D. 269.

The mound, which is a large one, is 660 feet long, 418 feet broad, and about 60 to 70 feet high. Its circuit as measured along the outer embankment of the moat is stated on the official notice board to be 563 ken = 1,119 yards.

The *misasagi* of the Emperor Ōjin[1] (died A.D. 310), the son of the Empress Jingo, is situated in the province of Kawachi. It is one of the largest of the recognised imperial mounds, being 2,312 yards or nearly a mile and a third in circuit, as measured along the outer embankment of the moat. Its height at the circular end is said to be about 60 or 70 feet.

The *misasagi* of the next Emperor Nintoku (died A.D. 399) is shown in Plate V. It is situated near Sakai in the province of Izumi, and is the largest of all the imperial burial mounds. It possesses two moats and three terraces, and is 2,475 yards or nearly a mile and a-half in circuit. The north or circular end is is about 94 feet high. This stupendous pile was erected by the people, doubtless in recognition of the beneficent reign of the emperor.[2]

The *misasagi* of the Emperor Richu (died A.D. 405), Plate VI, is not far distant from the last. It also is a large mound, but somewhat smaller than those of his two predecessors. Its base is 1,224 feet in length, and the circuit of its moat 871 ken, or 1,742 yards, *i.e.*, about a mile.

The misasagi of the Emperor Ingyo (died A.D. 453), the successor of Richu, is in the province of Kawachi near the village of Domioji. Plate VI.

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[1] This emperor some centuries after his death was deified as the War God Hachiman.

[2] It is recorded in the *Nihongi*, that the emperor ascended a high tower and looked far and wide, but no smoke arose in the land ; from this he inferred that the people were so poor that none in the houses were cooking rice. He then decreed that for the space of three years no taxes and no forced labour should be imposed. His own palace, for want of funds to repair it, was allowed to become so dilapidated that the roof admitted the rain. Three years later he again ascended the tower and beheld smoke rising from every dwelling. The people were now rich enough to bear taxation without feeling the burden, and voluntarily offered their labour and contributions towards the rebuilding of the palace.

Nintoku is said to have reached the advanced age of 122, but, it must be remembered, that it is not until the next reign that the miraculous details which characterise the early portion of Japanese history cease. In this connection too, it must be noted that the dates I have given, which are those of the Nihongi, before the reign of Richu, should be accepted with reserve.

The mound is 750 feet long and 528 feet broad, and about 60 feet high. According to the official notice board its circuit is 559 ken or 1,111 yards.

The burial mounds of the succeeding emperors up to Keitai are all of comparatively small size and much dilapidated so that none requires any special notice.

Passing now from the central provinces, the recognised sites of the capitals of the early emperors, and crossing over to the opposite side of the island, we find in the province of Izumo burial mounds of imperial form precisely similar to those with which I have already dealt.

The first which I shall describe is a large double mound behind the temple Dainenji, on the borders of the town of Imaichi. It contains a double-chambered dolmen. The mound is very much weathered, but from parts of it which have retained their form the original shape and some of its dimensions can be well determined. It possesses two terraces, the floor of the dolmen being on a level with the top of the lowest.

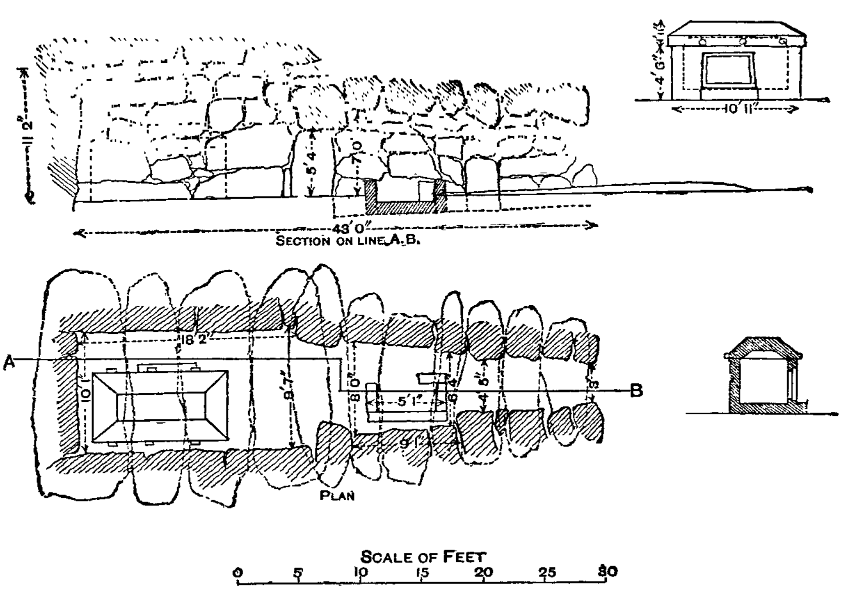

FIG. 14.—DOLMEN CONTAINING TWO STONE SARCOPHAGI AT IMAICHI (IZUMO.)

With elevation and transverse section of largest sarcophagus.

(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

In direction the mound runs E.N.E. and W.S.W., the round end, which contains the dolmen, being directed to the latter quarter.

The dolmen has the same orientation as the round peak, lying longitudinally in the mound, a position which I have not found elsewhere in Japan except at Teraguchi. In all other mounds of this form the direction of the dolmen is at right angles to their length.

As the breadth of the mound is more than sufficiently great to permit the dolmen to have been built in the normal position there must have been some special reason for its unusual position.

Dimensions.

Height of round end above the plain	42 feet.
Length of base of upper terrace	280 „
„ „ summit	145 „

The dolmen (Fig. 14) is constructed of rude stones, some of which have natural flat faces, but others are much rounded by weathering. It has two chambers, both of which contain stone sarcophagi.

The inner, which is the most capacious, has the following dimensions:—

Average Length	18 feet 10 inches.
„ Breadth	9 „ 9 „
„ Height	11 „ 2 „

Placed longitudinally in it is a huge sarcophagus hewn out of a single block of hard volcanic tuff, measuring internally at the top 9 feet long by 3 feet, 7½ inches broad; at the bottom 9 feet 4 inches long, 4 feet 5 inches broad, and 3 feet, 6 inches in depth. Its cover is of the usual roof-shaped form with projecting lugs, and is 1 foot 11 inches thick.

This sarcophagus is one of the largest I have found, and is remarkable also for the curious opening hewn in its front side. The opening is 4 feet 4 inches long by 2 feet 4 inches high and is recessed to receive a slab by which it was closed. Below it the bottom of the sarcophagus projects in the form of a step, upon which the slab rested. This peculiar feature is seen in three other sarcophagi in dolmens not far distant, and seems to be confined to the province of Izumo, as it has not yet been found elsewhere. As to the purpose it can have served I am unable to offer any explanation. It is too large to be intended for the introduction of offerings of food, or for the egress or ingress of the spirit of the dead.

The other chamber is much smaller than the inner, being only about 10 feet long, 9 feet high, and tapering from 8 feet at one end to 6 feet 4 inches at the other. Its floor is nearly 18 inches lower than that of the inner. The sarcophagus which it contains is much smaller, and is constructed of slabs somewhat roughly hewn. Its cover is broken up and also its front side.

Its internal dimensions are:—length, 5 feet 1 inch; breadth, 2 feet 5 inches; depth, 1 foot 10½ inches.

The inner chamber is partially separated from the outer by large stones which project like rude lintels from the walls on each side and also by a huge capstone resting upon them. The outer chamber is also marked off from the entrance gallery by similar side stones and a depression of the roof.

The total length of the dolmen from the back wall to the entrance of the gallery is 43 feet, and its breadth diminishes from 10 feet 1 inch at its inner extremity to 3 feet at its entrance.

This dolmen, I was informed, was opened in 1825, its floor was then covered with small round stones: since that date it has stood open. A large quantity of metallic remains, and many vessels of pottery, were taken out, but unfortunately all have been lost excepting the following, which are now kept in the temple :—

One straight sword blade, part only 28½ inches long, 1½ inches broad.
Several iron arrow heads.
Cheek piece of a horse bit, iron plated with copper.
Several metal ornaments for the trappings of a horse.
Part of spear head, iron.
One socket piece, iron.

None of the ornaments are gilt, all are simply of iron coated with copper. On the exterior of the mound I found many fragments of red terra-cotta *haniwa.*

The inner sarcophagus is doubtless that of an emperor or ruler of this important centre in the early history of Japan, and the outer, that of his empress or consort.

On a low upland near the village Enya mura, about a mile to the south of the Imaichi mound is another double mound containing a large dolmen of even greater importance than that just described, by reason of the structure of the dolmen chamber, its two well-hewn sarcophagi, and more especially for the numerous objects, weapons, armour, etc., which were found in it when it was opened in 1886.

The mound has, unfortunately, been reduced by the needs of agriculture and by weathering to a shapeless heap, but from its great length, compared with its breadth, and from the position of the dolmen within it, it was certainly originally a double mound of the imperial type.

The dolmen, with its sarcophagi *in situ,* is represented in plan and sections in Plate VII. It is contained in the west-north-west end of the mound, and its mouth is directed towards the west-south-west (W.S.W. 3° S.). It possesses a single chamber only, and in this the two sarcophagi are placed; the larger longitudinally against the west-north-west side, and the other transversely against the back wall.

The chamber has an average measurement of 21 feet in length, 8 feet 5 inches in breadth, and 9 feet 9 inches in height, and is separated from the entrance gallery by one of the wall stones on each side being set forward, and by a huge capstone which rests upon them as shown in the figure. When the dolmen was opened the entrance to the chamber was closed by hewn blocks built up across the gallery from side to side, some of which are still in position. The floor of the chamber is covered with large and small rounded pebbles.

The total length of the dolmen from the end of the chamber to the mouth of the gallery is 46 feet 8 inches, and its breadth diminishes from 8 feet 8 inches at its inner extremity to 3 feet 5 inches at its entrance. Both the chamber and gallery are constructed of moderately well-hewn blocks of volcanic rock.

The sarcophagi which are more carefully hewn than the walls of the dolmen have each a large well-cut aperture in the front side, that of the smaller being recessed so that it might be closed with a slab. The aperture in the largest sarcophagus measures 4 feet 1 inch by 1 foot 9 inches and in the smaller 3 feet 5 inches by 1 foot 4½ inches.

At the bottom of the former is an angular groove leading into the interior, probably intended to allow any water which might find its way into the sarcophagus to drain away.

Their internal dimensions are as follows :—

	Length.	Breadth.	Depth.	Thickness of sides.	Thickness of bottom.
Longitudinal sarcophagus	7′ 4″ top ... 7′ 9″ bottom ...	2′ 10″ top 3′ 3″ bottom	3′ 2″	9″ to 10″	1′ 0″
Transverse „	5′ 10″	3′ 1″	2′ 3″	6″ to 8″	9″

The capacity of both is increased by the lower sides of the covers being hewn out to a depth of 11 inches and 7 inches, respectively.

The chief objects which were found in this dolmen are now in the Government offices at Matsuye. The iron objects are nearly all converted into iron oxide, and, as little care seems to have been exercised in removing them, most are more or less imperfect. No record was made of the position of any in the dolmen, or of the shapeless masses of rust into which many others were oxidized which were thrown away.

List of articles now at the Government offices.

24 Iron arrow heads.
1 Straight iron one-edged sword, with the point broken off. Length of remaining part of blade, 2 feet 7½ inches; breadth, 1½ inch.
Wooden scabbard of the above, mounted with a single encircling band of copper, coated with silver, which bears a simple line pattern of punched dots.
1 Iron sword, straight blade, 16½ inches long. Total length, including grip, 23½ inches.
1 Iron sword, straight blade, 17 inches long. Tang imperfect.
1 „ „ „ „ 11¾ „ „ „ „
7 „ spear heads, socketed. Triangular blades.
4 „ halberd-shaped ornaments for horse trappings, coated with copper gilt.
8 Iron ornaments for horse trappings, plated with gilt copper.
4 „ „ „ „ „ „ „ „ „
2 „ „ coated with silver.
1 „ horse-bit, with check pieces of iron open work, plated with gilt copper.
1 Iron buckle.

1 Bronze bell.

2 Covered pots of ordinary dolmen form.

Besides the above there were several *magatama* (curved beads), and *kudatama* (bugles).

Respecting the position of these objects in the dolmen, the statements of the officials at the Government office, and of the head man of the village in which the dolmen is situated, were very conflicting; but as he was present at the opening, and assisted in taking out the objects, I am inclined to accept his version.

According to him, the longitudinal sarcophagus contained the short swords, bronze bell, some of the arrow heads, and some of the spear heads.

The transverse sarcophagus contained large masses of iron rust resembling plates of armour, magatama, the long sword, some arrow heads, and the silvered ornaments.

Some spear heads were found outside this sarcophagus near its W.N.W. end, and the horsebit and horse ornaments on its cover.

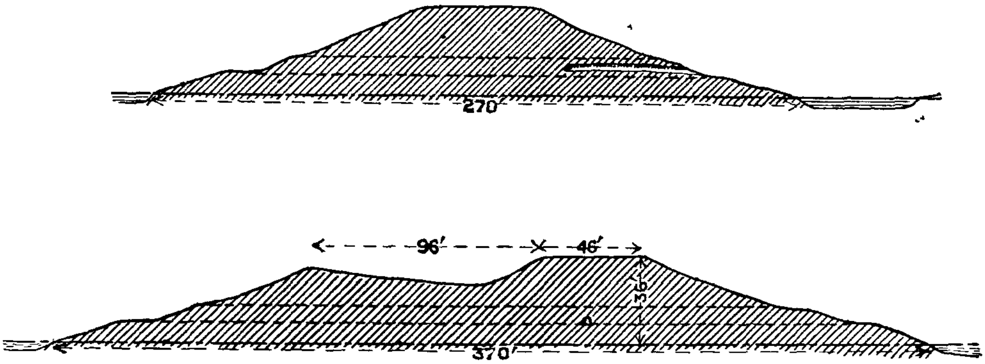

FIG. 15.—LONGITUDINAL AND TRANSVERSE SECTION OF DOUBLE MOUND AT OMURO.

No bones or vermilion were seen, and no pottery excepting the covers of the two shallow dishes, which were found just within the entrance of the chamber.

Leaving Izumo for a tract of country to the north-west of Tokyo, where the provinces of Kozuke, Musashi, and Shimotsuke meet, we find the most remarkable and extensive series of burial mounds which occurs outside the central provinces.

Here, within an area about twenty-five miles long, and about the same breadth, are scattered either singly or in groups about 300 mounds, nearly all containing dolmens. The district to which I gave special attention was that in the neighbourhood of the villages of Oya and Omuro in Kozuke, as one of its noteworthy features is the occurrence of six large double mounds of the imperial type, containing dolmens and one a cist, and two of the former had yielded some interesting vessels of pottery as well as metallic remains.

The occurrence of these double mounds, and the highly ornamented metal work which was found in the dolmens which both these and several of the simple mounds enclose, also the number of *tsuchiningyo* (terra-cotta figures) which have been unearthed from the interior of these and others, indicate clearly that the region was one of the leading centres during the flourishing part of the mound-building period.

The most important of those I examined were two double mounds near the village Ōmuro. The mounds are situated on the north and south of a much larger double mound with two moats, which is said to have never been opened.

The sectional sketch (Fig. 15), made from my own measurements, illustrates the north mound, which is called "Futago yama" or "twin hill." The mound is of the ordinary imperial type, with two terraces, and surrounded by a moat. It is, however, very much weathered, so that these features are partially obliterated. Its direction is E. 20° N., to W. 20° S., the rounded peak being at the eastern end.

Numerous *haniwa* (terra-cotta tubes) are embedded in the usual manner near the edges of the terraces and summit of both this and the next mound.

The dolmen, which is contained in the round end, is 48 feet in length, and is placed approximately at right angles to the long axis of the mound, with its entrance a little higher than the lower terrace, and facing S. 12° E. It consists of a chamber separated from the outer gallery by two rude slabs fixed vertically against the side walls with a capstone resting upon them, leaving a doorway of about 4 feet by 1 foot 9 inches.

The floor of the hinder part of the chamber for about 6 feet from the back wall is raised about 9 to 10 inches higher than the other part of the floor. Both were paved with large, flat, rough slabs, some of which are still *in situ*. The dimensions of the chamber are :—

Length of Chamber	17 feet.
„ Gallery	26 „
Total length	43 „
Chamber :—	
Breadth at back	6 feet 6 inches.
„ at front	5 „
Height	5 feet 6 inches to 6 „
Gallery :—	
Breadth	4 „
Height	5 „ 6 inches.

A diagram (Fig. 16) only is given, as it was impossible to make a complete drawing of the interior, owing to the quantity of earth which it contained, and, to obtain the measurements, this had to be dug into at several points.

The dolmen is constructed of unhewn, irregular blocks, none of which are specially remarkable for their size, the largest only measuring about 6 feet by 4 feet 3 inches. The objects which were found in it when it was opened are now in the possession of Mr. Negishi, of Omuro, and have been already described by Sir Ernest M. Satow in a paper read before the Asiatic Society of Tokyo, Japan.[1]

The most important are the following:—

From the raised part of the chamber:—

- 4 horse ornaments of iron, plated with gilt copper.
- 1 small bronze mirror.
- 1 iron spear head.
- Numerous beads of blue glass.
- 1 penannular ring, plated with gold.

From lower part of the chamber;—

- 1 horsebit, with cheek-pieces of iron, plated with gilt copper.
- 1 stirrup iron.
- 1 iron spear head.
- Several iron arrow heads.
- 17 vessels of pottery, chiefly of types b, d, e, k, f (Fig. 22), but several of softer clay than ordinary dolmen pottery.

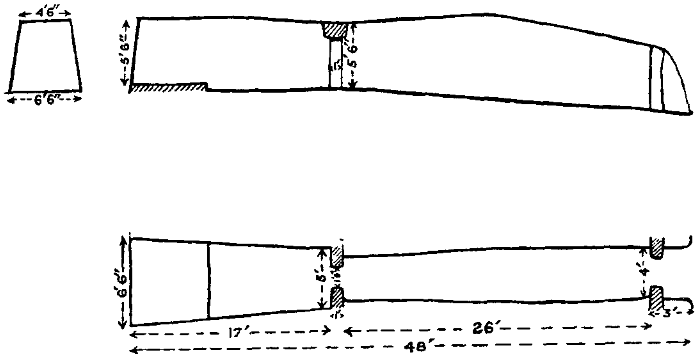

FIG. 16.—PLAN AND SECTIONS OF DOLMEN IN THE DOUBLE MOUND AT OMURO.

The head of a *tsuchi-ningyō* (terra-cotta figure) was found buried in the earth on the outside of the mound.

The horse ornaments and cheek-pieces of a bit are practically identical with those in the British Museum, which I obtained from a dolmen in Tamba.[2]

A notable feature of the mound, which, however, as we have already seen, is not peculiar to it, is its imposing size when compared with that of the dolmen it contains. This teaches us how very careful we should be in our explorations of sepulchral mounds in pronouncing any to be without a chamber, although we may have sunk shafts and driven tunnels in them without finding one. In this example we might have sunk a shaft from the middle of its summit to its base, and tunnelled through it from end to end along its median line, and never found the comparatively large dolmen which it contains.

The southern mound, which is called "*Uchibori tsuka*," is slightly smaller than that just described, and has only one terrace, but otherwise it is similar to it. The dolmen it contains is similarly placed, but is only 27 feet 6 inches in total length, and faces S. 25° W. The chamber is large, 21 feet 6 inches long, 8 feet 4 inches wide at the back, and 5 feet at the front, and 7 to 8 feet high. At a distance of 9 feet from its back wall it is divided into two by two slabs of stone placed transversely across the floor and rising about 13 inches above it. The inner portion of the floor is strewn with round pebbles.

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[1] *Trans. of the Asiatic Society of Japan*, vol. vii, 313, *et seq.*

[2] *Archæologia*, vol. 55, Figs. 29, 30A, pp. 487, 488.

It is merely a form of *allée couverte,* its walls gradually converging to the entrance to the short gallery. The floor is about on a level with the top of the terrace.

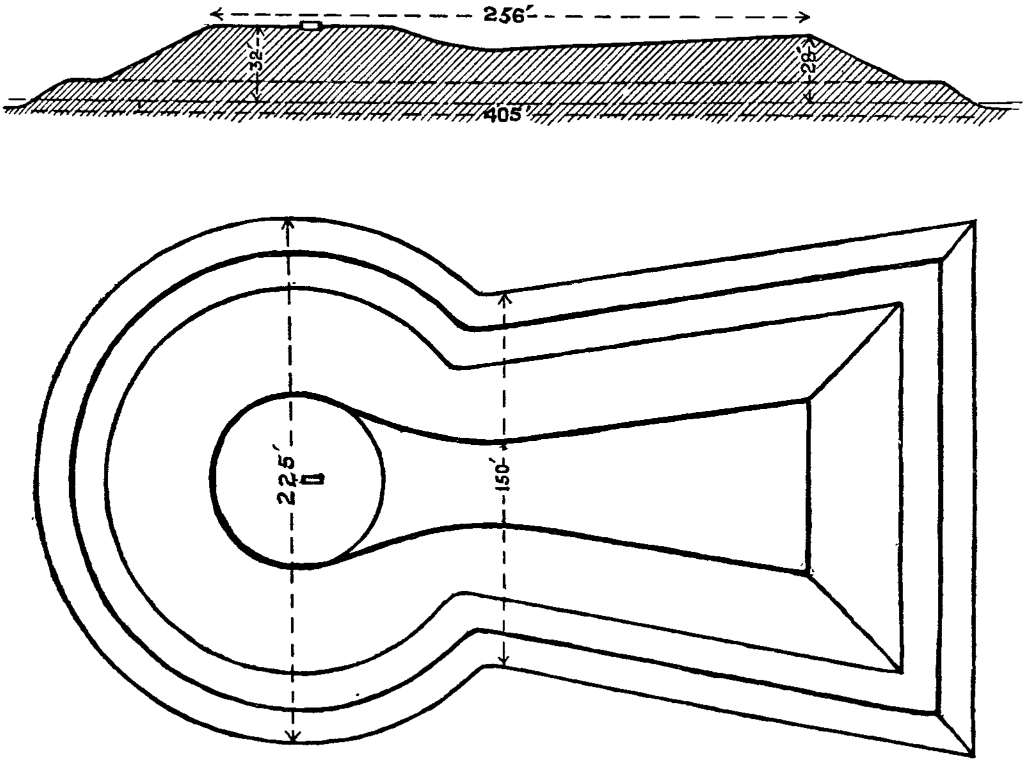

FIG. 17.—PLAN AND SECTION OF DOUBLE MOUND WITH A SARCOPHAGUS EXPOSED ON ITS SUMMIT.

The remains found in this mound were as follows:—

Four iron swords,
Several iron rings,
„ human teeth,
„ iron arrow-heads,
Six vessels of pottery of ordinary dolmen shapes.

A large double mound about four miles to the south of the above is worthy of note, as it contains no dolmen, but merely a stone sarcophagus, which is placed at the summit of the round peak. It is the only example I have found of a mound of this form containing a sarcophagus not placed in a dolmen chamber although such is by no means uncommon in simple conical mounds. The mound with the sarcophagus *in situ* is shown in Fig. 17. The mound lies E. 20° N., W. 20° S., and the sarcophagus has the same direction. Its base measures approximately, length, 405 feet, extreme breadth, 225 feet, height, 32 feet, and it has been surrounded by a double moat. The sarcophagus consists of two longitudinal side slabs rather roughly hewn, which are channelled to receive the transverse slabs forming the ends. The bases of these slabs rest on a ledge cut in the large slab forming the bottom. The interior dimensions are, length, 6 feet 7½ inches, breadth, 2 feet 2½ inches, depth, 2 feet 9 inches.

The sarcophagus now projects about 6 inches above the ground, but originally it was covered with earth, which was removed when the summit was levelled long ago to form a site for a Shinto shrine. Fragments of *haniwa* are found on the mound, and these and its double form are the only clues to its approximate age.

Another important and, in fact, the most ancient, centre of the early rulers is the island of Kyushu. Many of the very numerous mounds there have been opened and a great number of objects have been obtained from their chambers. The mounds are chiefly of the simple conical type, some being of imposing size, and most contain a dolmen.

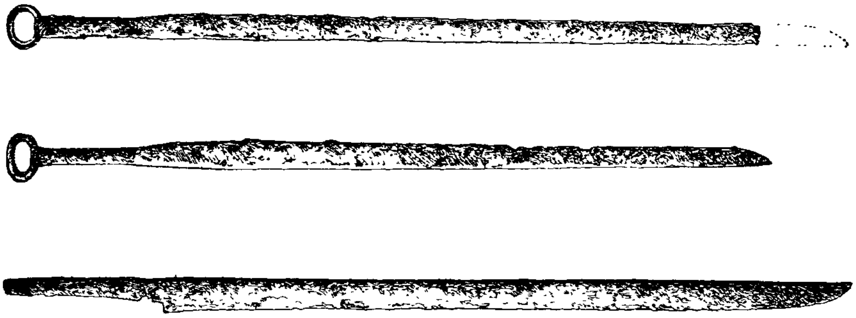

FIG. 18.—SWORDS FROM THE HIGO DOLMEN.

Double mounds of imperial form also occur. Some of the most important objects which have yet been found in any burial mound were taken out from the dolmen chamber of a double mound in the province of Higo, which has been previously mentioned as having had many stone figures of men set up upon it. The objects taken from this mound are now in the Imperial Museum, Tokyo. They comprise, amongst others of more common occurrence:—

Fourteen sword blades, three of which are illustrated in Fig. 18.

The longest blade is 3 feet 0·5 inch long and its tang 8½ inches, the total length being 3 feet 9 inches. The shortest blade is 2 feet 6 inches long with a tang of 6 inches.

Some pieces of armour and a helmet of special interest were found together with the swords, also several spear heads.

The armour consisted of two cuirasses, one of which is illustrated in Fig. 19. It is formed of iron plates very skilfully forged and riveted together. The helmet is of similar construction. Both the helmet and the cuirasses are entirely different in form from those of historical times, but the latter agree very closely with the armour represented on the terra-cotta figure (*tsuchi ningyō*). Fig. 6.

Thin plates or bands of gilt copper seem to have played an important part in the decoration of the robes of the dead. They are of frequent occurrence in the dolmen chamber of important mounds, and are always found along with the fragments of bones, when there are any, or in that part of the chamber where the body had lain.

The largest piece from this mound is a broad band of copper gilt foil, ornamented with a hexagonal net-like pattern, the decorative effect being increased by a small circular pendant of gilt copper foil suspended by wires from the angles of the hexagons. But more important than these by reason of its elaborate decoration is a tiara of gilt copper having in addition to the punched dot decoration, rich scroll designs in pierced work.

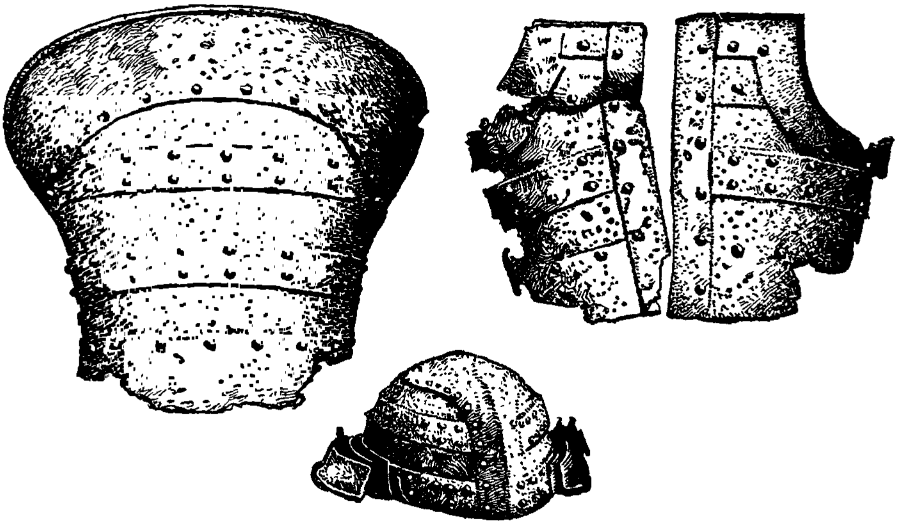

FIG. 19.—IRON CUIRASS AND HELMET. $\frac{1}{8}$ LINEAR.
(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

Besides the above there were also found two pendants and earrings of solid gold with small beads of green enamel like glass set in the former as jewels.

The shoes of the Higo warrior are also of copper thickly gilt. These like the broad band are ornamented with the hexagonal pattern with pendants suspended from the angles.

Along with these splendid examples of metal work, there were also found 2 iron stirrups, 2 horse bits, 52 ordinary beads of blue glass, 11 cylindrical beads of green jasper, and a covered earthenware dish, all of which are precisely identical with those found in dolmen mounds in Kozuke, Izumo, Kawachi and other provinces.

Six Chinese mirrors were also found with the above, and from these the approximate date of the mound has been determined to be not later than the third or fourth century of our era.

This double mound, from the objects found in its dolmen, must, I think, be considered to be the tomb of a ruler of imperial rank.

The most important weapon in all these burial mounds is a straight one-edged sword. This one-edged sword has one special characteristic, *i.e.*, it has a perfectly straight back, and it is thus distinguished from the curved swords of later times. It is, in fact, essentially the sword of the period of the dolmen mounds, first appearing at its beginning and dying out, and being displaced by the curved blade at its close.

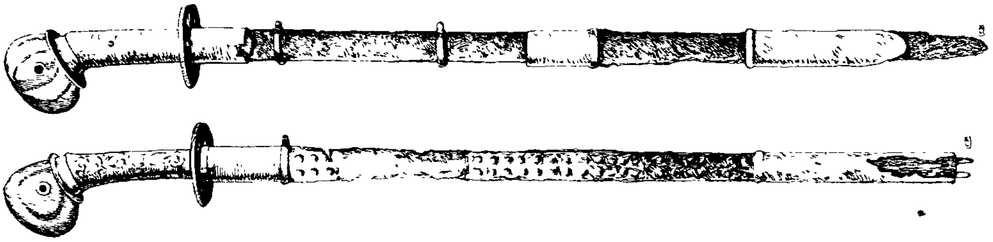

FIG. 20.—SWORDS FROM MUSASHI.

These swords are of two kinds, viz., long and short. The former are most numerous, and the length of their blades from guard to point varies generally from 2 feet 6 inches to 3 feet. The latter vary from 1 foot 8 inches to 2 feet.

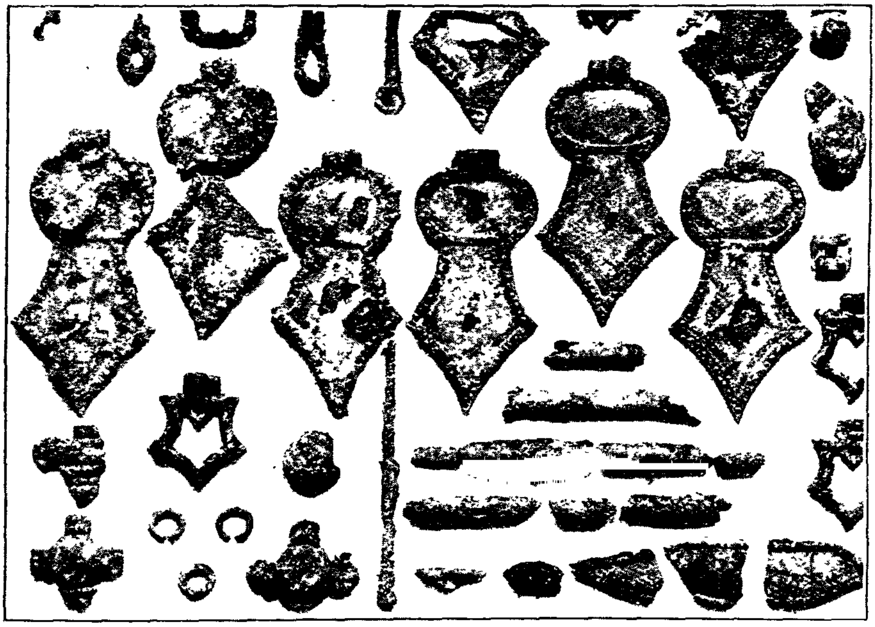

FIG. 21.—ORNAMENTAL APPENDAGES OF HORSE-TRAPPINGS FROM A DOLMEN AT ROKUYA (TAMBA).

(Reproduced by the courtesy of the Council of the Japan Society.)

The two swords in Fig. 20 are from a double mound in Musashi. They are remarkable for the rich ornamentation of their scabbards and grips, which are plated with gilt copper.

Of all the metal objects found in burial mounds, not even excepting the swords, the bits and other furniture of the horse are generally the most richly ornamented.

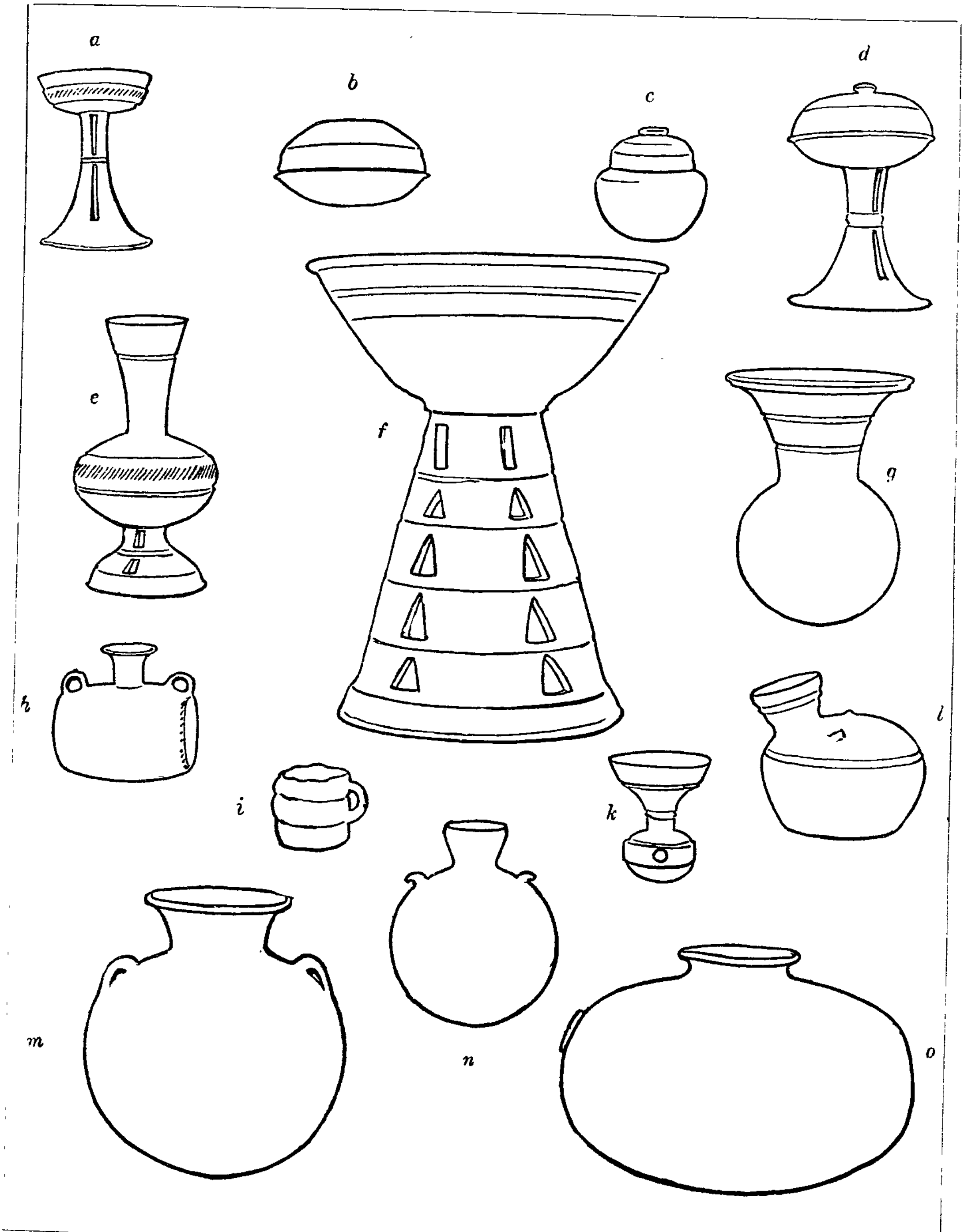

FIG. 22.—CHIEF TYPES OF THE POTTERY. $\frac{1}{8}$ LINEAR.
(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

In Fig. 21 are represented some of the halberd-shaped appendages which were attached to various parts of the hempen trappings of a horse. They consist of iron plates covered with thin copper foil which is generally coated with gold. Those shown in the figure are precisely analogous to the four which were taken from the dolmen in the double mound at Omuro (Kozuke).

Considerable quantities of pottery have also been found in every group of dolmen mounds.

Typical forms of the vessels are shown in Fig. 22, but more elaborate forms also occur in the more important burial mounds. An account of all this sepulchral pottery will be found in my paper, "The Dolmens and Burial Mounds of Japan," already cited.

It will hence suffice for me to say here that the vessels are most numerous in the dolmen chamber, but they are also found in the gallery and on the south side of the circular mounds. In double mounds they also occur on the summit of the square end.

I have been unable to give an account of the contents of the imperial mounds in the central provinces which I have described, as, with the exception of the *misasagi* of the Emperor Nintoku, there is no record of the opening or exploration of any; and all it has been possible to ascertain about the objects found in the mound of that emperor is that they consisted of iron armour and one or more straight swords. The armour is said to have closely resembled the cuirass (Fig. 19) which was found in the dolmen chamber of the Higo mound. Although all appear to have been rifled, the penalties attaching to robbery of an imperial burial mound are so severe that whatever has been found has been disposed of secretly. In nearly all cases, too, if we may judge from the present ruinous condition of most of the mounds, this rifling took place many years, probably many centuries, ago.

On a review of the fragmentary evidence available, however, the objects appear to have been *magatama* (curved beads) of various stones (Fig. 23), *kudatama* (cylindrical beads) of green jasper, other beads of glass, steatite, and rock crystal, ornaments or insignia of jasper, armlets of steatite, iron armour, straight iron swords, horse bits, and ornaments of the saddle and trappings; also many kinds of vessels of grey earthenware, of which typical forms are given in Fig. 22.

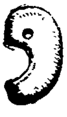

FIG. 23.

Magatama. ½ linear.

(Reproduced by the courtesy of the Council of the Society of Antiquaries.)

Fortunately, in the other centres of ancient rule in Izumo, Kyushu, and in the somewhat later one, the district of Musashi and Kozuke, several mounds of imperial form have been opened in recent times. Their contents, some of which I have already described, have been more or less carefully recorded and preserved, and afford us a tolerably complete presentment of the appurtenances of sepulture of an emperor or ruler in a double mound.

In most countries the building of mounds, especially of dolmen mounds, is associated with a rude stage in the civilisation of a race. The remains found in them are few, and where they occur they are mostly of stone or bronze, and rarely of iron. But in Japan all the larger mounds and the dolmens, even the rudest, belong to the iron age.

The Japanese, indeed, during this period, had reached a very high stage of civilisation. They were expert metallurgists and workers in metal, skilful as potters, and had even then developed those artistic traits for which in later times they have become so distinguished.

When a chieftain was laid in the rude stone chamber of a mound, his wants in a future world, where he was supposed to continue his existence, were supplied in unstinted measure. He was clothed in his robes, adorned with his personal ornaments, his implements of war and of the chase, and the bits and trappings of his horse were all placed near him. Around and at the entrance of the dolmen chamber were arranged offerings of food, water, wine and flowers, in vessels of pottery, some of which are of elaborate forms.

During the period of the double mounds, the bodies of the dead were not cremated,[1] and there are the strongest grounds for believing that in the still more remote times of the earliest simple burial mounds inhumation alone was practised.

Unfortunately, no well or even moderately preserved skeleton has yet been found in any dolmen mound. The damp atmosphere of the chamber, and the free infiltration of water through the spaces between the stones in both walls and roof appear to have been most destructive to bone, removing nearly the whole of its organic matter and resolving it into bone earth. So much so, that when human bones are found, they are always in such a state of decay that they can be rubbed to powder between the fingers, and occur in such small fragments that so far it has not been possible to obtain any useful measurements.

The body was laid in a sarcophagus of wood, stone or terra-cotta. When the sarcophagus was of stone, it might be supposed from its structure (see below), that the bones would not have perished. Most of these, however, have been rifled in bygone times, and in the few which have been opened during recent years no bones are said to have been found, so that in these also the bones had decayed and were in the form of earth or very small fragments.

A considerable amount of light is thrown on the history, civilisation and customs of the ancient Japanese by these burial mounds and their remains. In the early part of the period during which they were builders of double mounds, they seem to have been a collection of independent or semi-independent clans of the same race, armed with the same weapons, and having the same burial customs and religious beliefs. They occupied certain distinct centres—now marked by extensive groups of dolmen and burial mounds. These are separated from one another by more or less wide tracts of country where few or no sepulchral mounds are found. The country was then, in fact, only very partially occupied by them.

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[1] Cremation in Japan only dates from the establishment of Buddhism in the country (sixth and seventh centuries A.C.) and the first of the imperial line whose body was burned before burial is said to have been the Empress Jito (D. 702), but this is rather doubtful. However, in A.D. 840, the body of the Emperor Junna was undoubtedly cremated, and it is worthy of note in connection with the rites as then followed, that the cremation did not take place near the tomb, but about three miles distant, and that two mounds, both of which I visited, were erected to his memory, one to mark the site of the cremation and the other the spot where the ashes were buried.

The chief of these centres are four in number, viz.:—

The central provinces, Settsu, Izumi, Yamato and Kawachi	Yamato centre.
Izumo, Hoki	Izumo centre.
North and East provinces of Kyushu	Kyushu centre.
Kozuke, Musashi, Shimotsuke	Musashi centre.

To these may perhaps be added another. Bizen and its adjacent province Bingo, although this centre was probably of later date than the others.

The province of Yamato, according to Japanese ancient records, was the *locus* of a central government in early times. Its chief rulers are styled emperors, and are held to have been supreme in authority over the whole country. This is open to serious doubt so far as the early half of the dolmen mound period is concerned. The characteristic form of an imperial burial mound for the Yamato rulers of that time is the huge double mound, but precisely the same form of mound is also found, as we have seen, in the four other centres associated with groups of dolmens. It is true that the double mounds are more numerous, and some are larger in the Yamato centre than in the others, yet unless the tribes occupying the latter were independent or their rulers were regarded as the equals of the Yamato chiefs, no mounds of this imperial form should be found in them at all. Besides, the objects which have been found in some of the mounds of these four districts indicate even greater wealth and magnificence of display than those found in the Yamato centre to which the sites of successive imperial courts are assigned. The Yamato rulers subsequently acquired sway over them, but not until a considerable part of the period under consideration had elapsed.

In this connection it must not be overlooked that in the province of Yamato and Kawachi there are many double-peaked mounds of vast size and imposing appearance without either name or tradition attached to them, and quite uncared for, whilst in close proximity comparatively insignificant tumuli are recognised as the burial places of known emperors, and have official custodians allotted to them.

Professor Basil Hall Chamberlain has approached this question of the supremacy of the Yamato emperors from the point of view of the ancient records, and I may be permitted here to quote his opinion as given in the introduction to his translation of the *Kojiki.*

"We find that the 'Territorial owners' of Yamato, and the 'Rulers' of Idzumo, whom Jimmu or his successors are said to have subjugated, are constantly spoken of in the plural, as if to intimate that they exercised a divided sovereignty.

"During the whole of the so-called 'Human age' we meet both in parts of the country which were already subject to the Imperial rule, and in others which were not yet annexed, with local magnates bearing these same titles, 'Territorial

Owners,' 'Rulers,' 'Chiefs,' etc., and the impression left on the mind is that in early historical times the sovereign's power was not exercised directly over all parts of Japan, but that in many cases the local chieftains continued to hold sway though owing some sort of allegiance to the emperor in Yamato, while in others the emperor was strong enough to depose these local rulers, and to put in their place his own kindred or retainers, who, however, exercised unlimited authority in their own districts, and used the same titles as had been borne by the former native rulers, that, in fact, the government was feuda rather than centralised."[1]

He further states: "The question of the ancient division of Japan into several independent states is, however, not completely a matter of opinion. For we have in the '*Shang Hai Ching*' a positive statement concerning a northern and a southern Yamato, and the Chinese annals of both the Han dynasties tell us of the division of the country into a much larger number of kingdoms, of which, according to the annals of the later Han dynasty, Yamato was the most powerful."

I may add that since A.D. 1242, beginning with the Emperor Shijo, all the emperors have been buried in the grounds behind the temple Senyuji, Kyoto.

The late Emperor Komei, who died in 1866, was buried in a wooden sarcophagus in a terraced mound on the summit of a natural hill in the above grounds (Plate VIII). Several megalithic blocks, which crown the top of the mound, may be regarded as a survival of the ancient practice of dolmen burial.

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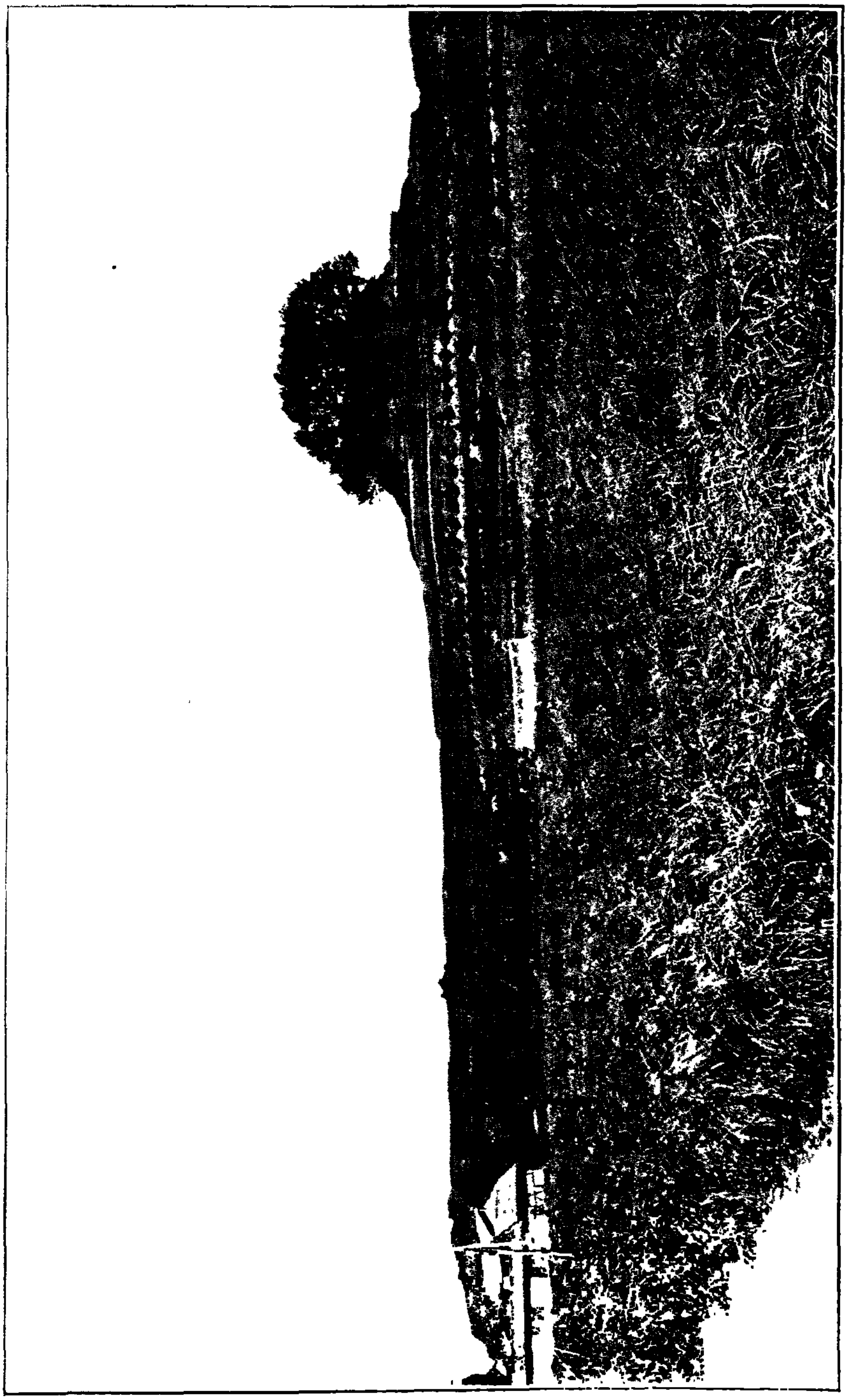
[1] *Kojiki, or Records of Ancient Matters* (date A.D. 712). Translation by B. H. Chamberlain. Introduction, p. lxii, lxiii.

EXTERNAL VIEW OF A MOUND CONTAINING A DOLMEN AT ASAKURA (IYO).

(Reproduced by the courtesy of the Council of the Japan Society.)

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.



DOUBLE MOUND CONTAINING A DOLMEN AT MISE (YAMATO).

(Reproduced by the courtesy of the Council of the Japan Society.)

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.

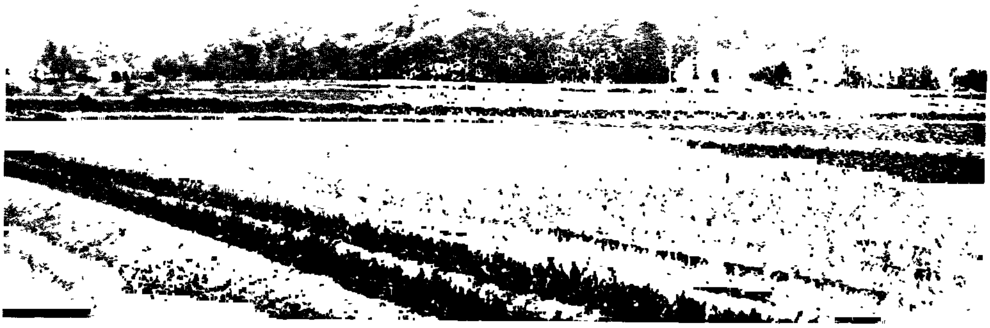


FIG. 1.—MISASAGI OF KEITAI.

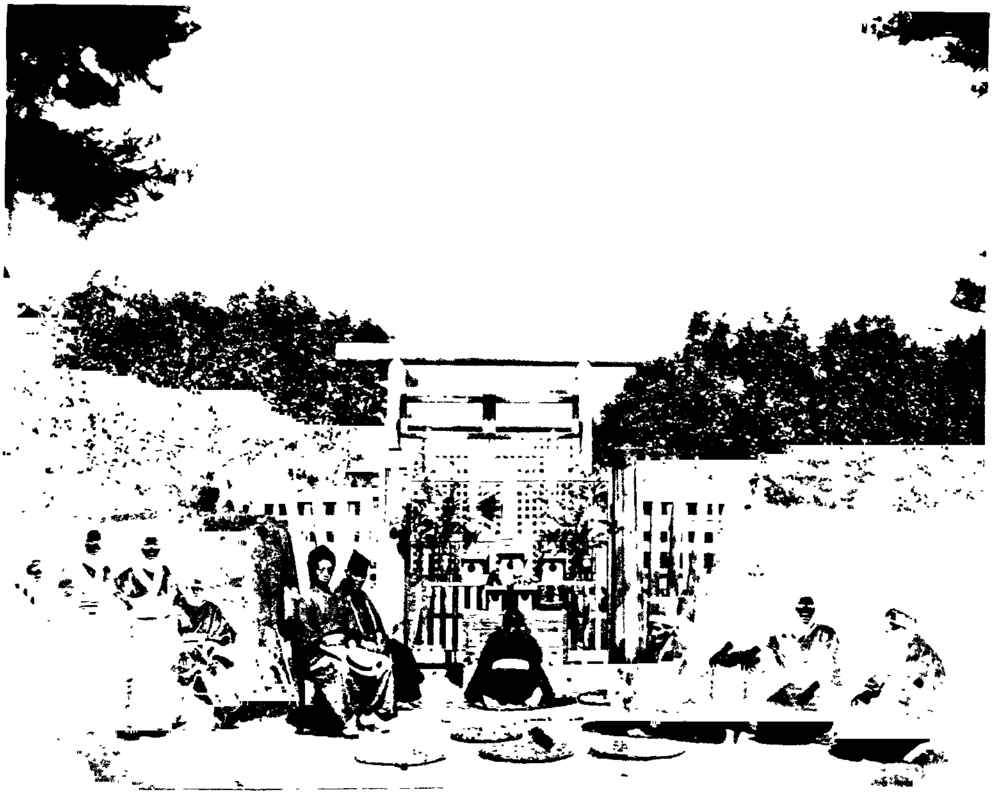
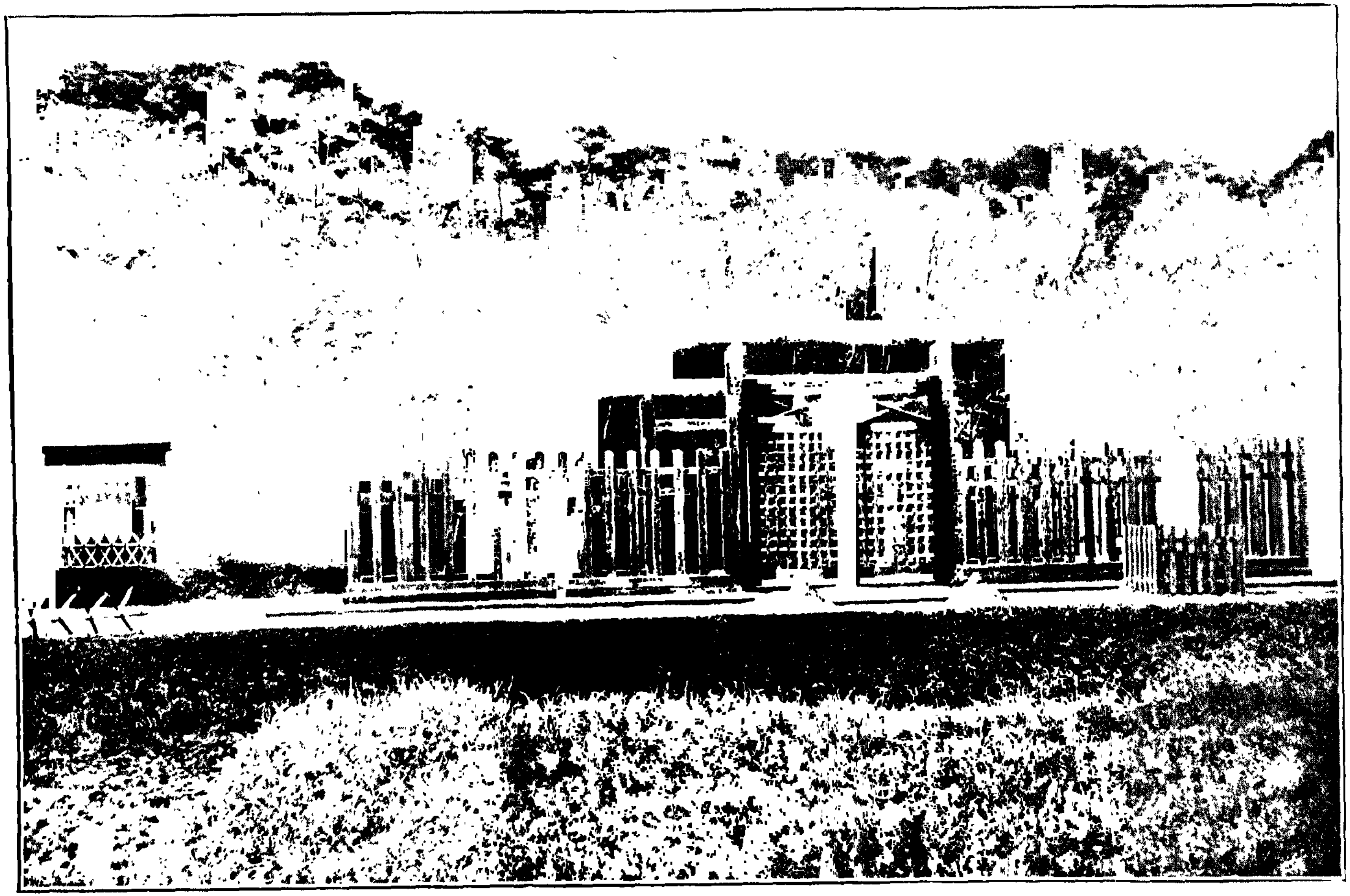


FIG. 2.—CEREMONY AT JIMMU'S TOMB.

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.



SACRED ENCLOSURE IN FRONT OF THE TUMULUS OF THE EMPEROR KEITAI (DIED 531 A.D.)

(*Reproduced by the courtesy of the Council of the Japan Society.*)

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.

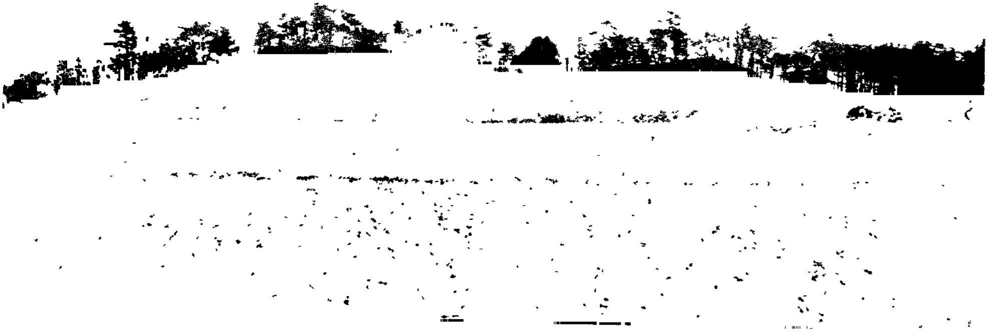


FIG. 1.—MISASAGI OF CHUAI.

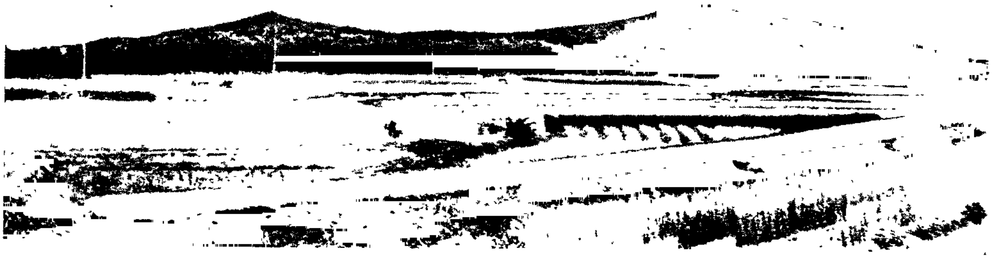


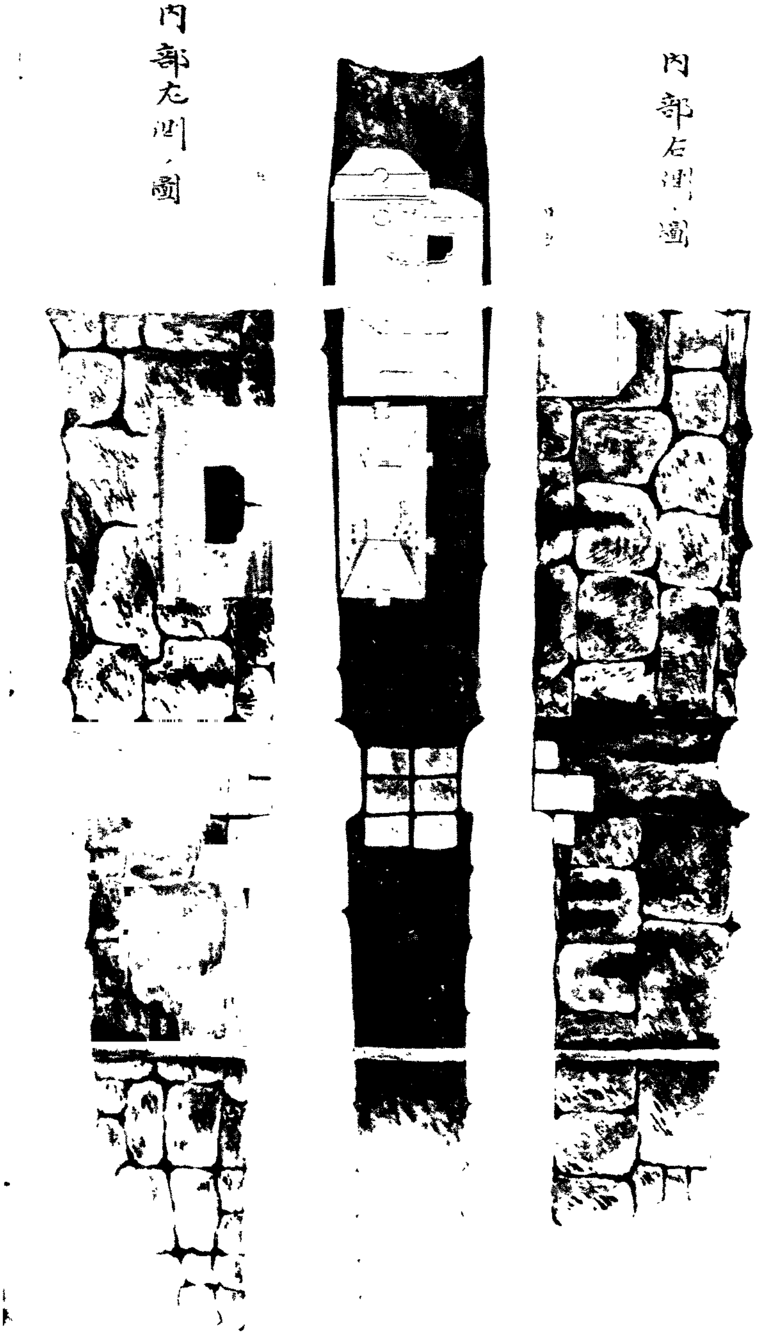
FIG. 2.—MISASAGI OF NINTOKU.

THE DOLMENS AND BURIAL MOUNDS OF THE EARLY EMPERORS OF JAPAN.

FIG. 1.—MISASAGI OF THE EMPEROR RICHU.

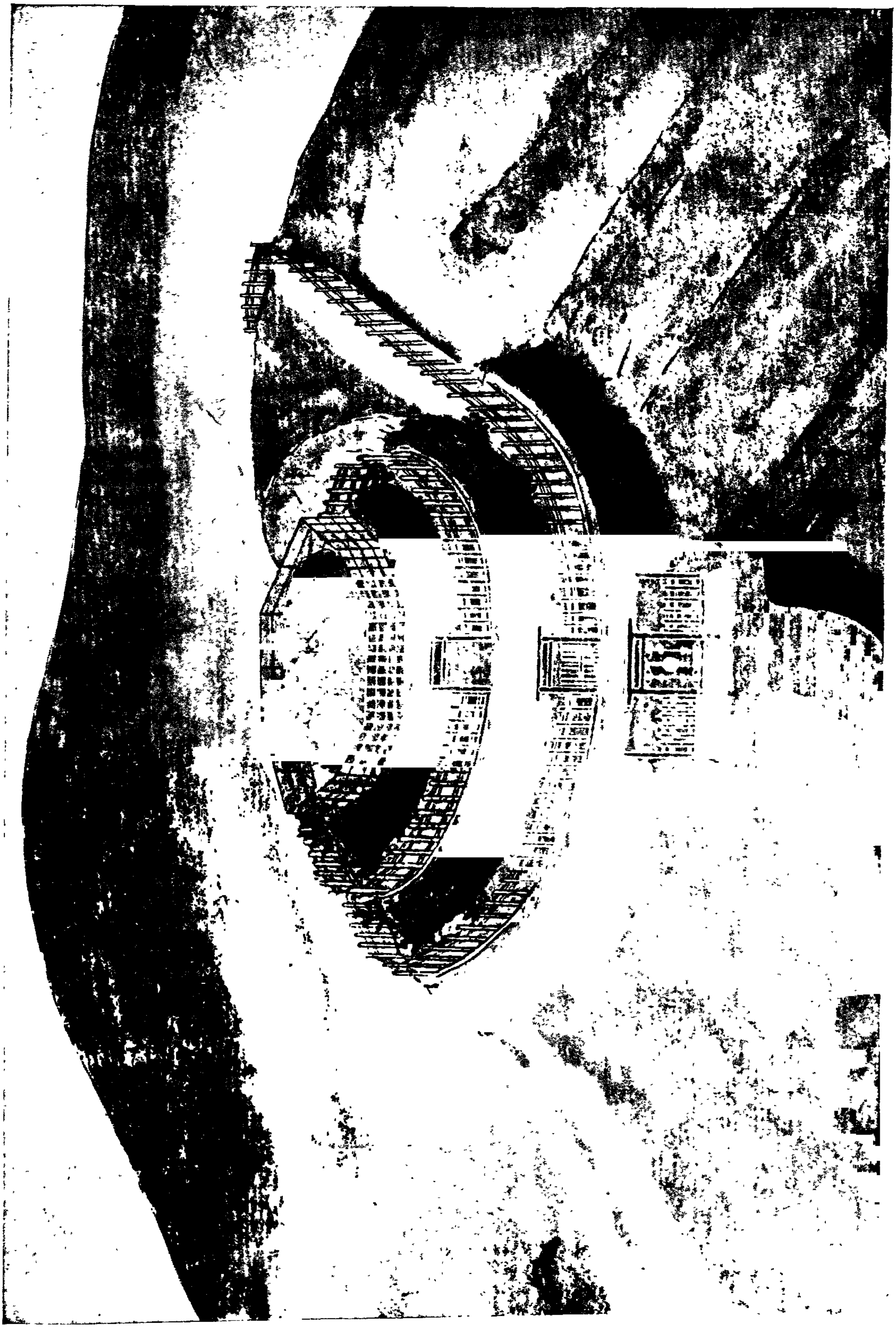
FIG. 2.—MISASAGI OF THE EMPEROR INGYO.

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.



DOLMEN AT ENYA.

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.



BURIAL MOUND OF THE LAST EMPEROR (*from a Japanese Print*).

THE BURIAL MOUNDS AND DOLMENS OF THE EARLY EMPERORS OF JAPAN.

THE HEAD OF AN ABORIGINAL AUSTRALIAN.

By D. J. Cunningham, M.D., D.Sc., LL.D., D.C.L., F.R.S., Professor of Anatomy in the University of Edinburgh.

[With Plates IX–XI.]

A few months ago I received from Dr. W. Ramsay Smith, of Adelaide, to whom the University of Edinburgh owes so much for the numerous valuable contributions he has made to the ethnological collection in the Anatomical Museum, the head of a male Australian aboriginal. The label attached stated that the native in question was named Pokallie, alias Boco, that he came from Haddon Downs, and that he was forty-seven years of age. The hair had been removed from the scalp and face and the specimen had been most skilfully and successfully preserved by formalin injection. The features and general contour of the head had therefore suffered little or no change, and could be studied with a thoroughness which is very seldom possible in investigations of the kind.

Certain of the features of this head were so remarkable that I wrote to my friend Dr. Ramsay Smith and asked him if he would favour me with some additional particulars regarding the history of Boco. By return of post I had the information I wanted. The note furnished me was as follows: "Pokallie, alias Boco, was sent to the lunatic asylum on May 23rd, 1894, and died of organic disease of the brain on June 13th, 1905. On admission he was well nourished and appeared in good health. The two central incisors of the upper jaw were absent. He was in a state of melancholic stupor the whole of the eleven years he was in the asylum. He never spoke nor took the least interest in anything that went on around him, nor even resented the violence he sometimes received from a fellow-countryman."

Whether the peculiar formation of the head has any connection with the insanity, I would not pretend to say, but I imagine from the above note that Dr. Ramsay Smith, a high authority, did not think so, seeing that he explicitly mentions *organic disease of the brain* as being the cause of death, and does not refer to any signs of idiocy or mental deficiency in Boco during the thirty-six years of life which he spent outside the asylum.

Front View of the Head. Plate X, Fig. 8.

Viewed from the front, the specimen presents some striking features. Those which catch the eye most are: (1) The great prominence of the supraorbital regions of the forehead; (2) The narrowness of the forehead; (3) The receding and sloping forehead; (4) The width of the zygomatic region; (5) The retreating chin and the almost complete absence of a mental prominence. These features are more or less evident in Figs. 8 and 9, Plate X.

The supraorbital projections constitute in each case a true torus supraorbitalis, quite as projecting and prominent as in the Neanderthal, Spy or Krapina specimens. Further, as in these palæolithic remains, the torus forms a continuous arch from the glabella to the external angular process. These supraorbital arches are more prominent internally than externally, and in the middle line they are separated from each other, as in the Neanderthal cranium, by a narrow and shallow median depression which represents the glabella. I do not intend dwelling in the meantime on the significance of these striking supraorbital formations, as I am at present engaged in the study of the evolution of this region of the skull, and hope shortly to publish the results of my investigation.

Owing to the brow projections, the eyes are placed very deeply and look out from under the shelter of the bony arches which lie above them. The nasion also lies at the bottom of an extremely deep notch, bounded above by the massive glabella.

The minimum frontal diameter is only 91 mm. Taken by itself, this diameter is not remarkable. Even in the European the measurement on the skull sometimes falls below this. Amongst the inhabitants of Alsace, Schwalbe(4) gives two instances in which it was respectively 88 and 86. At the same time, it should be noted that in the measurements of living Australian natives which are recorded by Spencer and Gillen(8) we find none with a minimum frontal diameter less than 100 mm. In the figures given by Sir William Turner,(9) Australian skulls with a minimum frontal diameter of from 90 to 93 are not uncommon, whilst amongst the females there is one specimen with a diameter of 84.

In the head under consideration there is a marked constriction of the cranium behind the orbits. This can best be expressed by the bi-orbital index (Manouvrier and Schwalbe) obtained in the following way:

$$\frac{\text{Minimum frontal diameter} \times 100}{\text{External orbital diameter.}}$$

The fronto-parietal index, as Schwalbe(4) has shown, and for reasons which I have also given in a recent paper,(1) cannot be trusted to express accurately this feature of the skull.

In Boco the bi-orbital index is as low as 78·8—lower than in the Neanderthal cranium, lower than in Pithecanthropus and only exceeded in the accentuation of this character by the remarkable Santos skull described by Nehring,(3) the index of which is 75·4 (see Table in Schwalbe's memoir(4) on Pithecanthropus, p. 96). According to Schwalbe, the majority of the skulls of recent man have a bi-orbital index of over 90.

Amongst Australian natives it is not uncommon to meet with cases in which the forehead is exceedingly flat and receding, but this is by no means a constant feature of the race. Schwalbe endeavours to express the degree of frontal depression by means of an angle which he calls the frontal angle. For this purpose it is necessary to take a mesial contour-tracing of the head. Various instruments may be employed for this purpose, but in the case of Boco I have used Lissauer's Diagraph, constructed on very nearly the same plan as is described in the *Archiv f. Anthropologie*, vol. xv. This tracing, reduced by one-half, is seen in Fig. 1. A base line is now drawn from the inion to the most prominent point on the glabella, and from the anterior end of this a second line is carried so as to touch tangentially the most prominent part of the cerebral part of the frontal plate. The angle formed by these two lines is Schwalbe's frontal angle. In Boco this angle is 69·5°; in the Neanderthal cranium it is 62°.

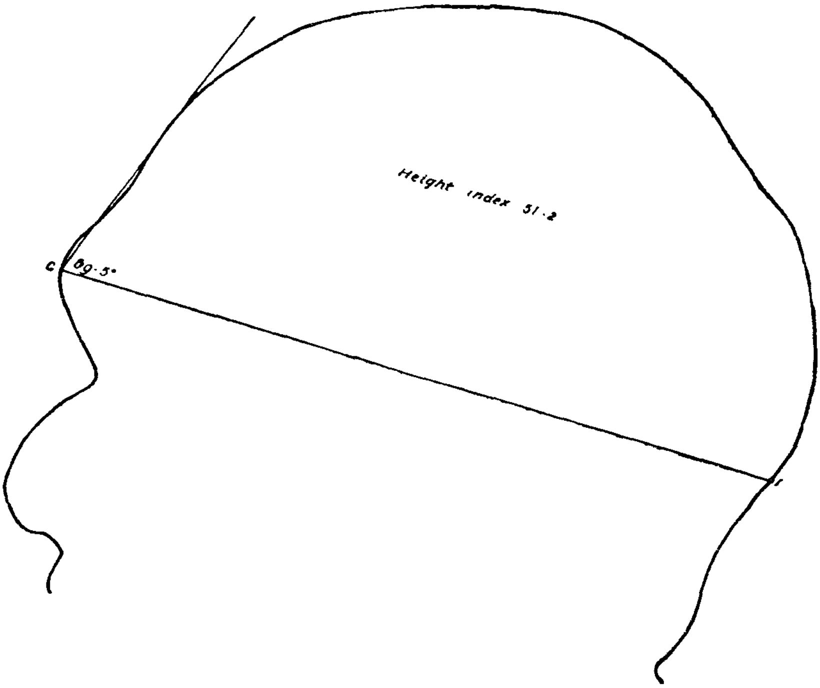


FIG. 1.—CONTOUR TRACING OF THE HEAD OF BOCO, TAKEN BY LISSAUER'S DIAGRAPH.

Amongst the living races of man, Schwalbe only found one skull with a frontal angle as low as 73°. If the opportunity had been afforded him of studying a larger series of specimens, he would doubtless have found many more with a similar angle, or indeed an angle still more acute.

In two crania which I recently examined and described(¹) it was respectively 69° and 73·5°.

But this angle is of no value in judging the point at issue. The glabella from which the frontal line is reared is a much more variable feature than the degree of frontal curvature, and in those skulls in which the glabella is very projecting (Neanderthal, Spy, Boco, etc.) the acuteness of the angle is determined chiefly by this factor. This is seen in the X-Ray photograph which is given of Boco's head, Plate XI. In this the outline of the cerebral hemisphere and the internal contour line of the cranial wall can be easily followed, and it will be noticed how much the flattened appearance of the forehead is due to the massive glabellar region. Indeed in this photograph the most prominent point on the surface of the bony torus supraorbitalis (not the scalp) lies 30 mm. in front of the frontal pole of the cerebral hemisphere: and although unquestionably the cerebral part of the frontal bone is much depressed, it is not inclined to the degree indicated by the frontal angle. Of course, in drawing conclusions from X-Ray photographs, the distortion of the figure, more especially in the marginal parts, must not be forgotten. The maximum length of the cranium of Boco is 200 mm.; in the X-Ray photograph it is 238 mm.

Unfortunately, we have no accurate method of expressing the degree of frontal flattening in the recent head, because it is impossible to detect with any degree of certainty the position of the bregma.[1] It is very clearly marked in the X-Ray photograph, but, owing to the unequal enlargement of the different parts of the specimen, the information thus afforded cannot be applied.

The zygomatic width is not excessive. Indeed, there are several cases given in Spencer and Gillen's table(8) of measurements in which this diameter is considerably greater in the native Australian. In Boco the interzygomatic diameter is 145 mm.; Spencer and Gillen give two measurements of 150 mm. and 151 mm. respectively. But, relatively to the frontal diameter and the width of the lower part of the face, the length of this diameter is striking and gives to the front view of the face a marked lozenge-shaped or rhomboidal appearance.

The nose is flat and broad, and resembles closely the corresponding feature in the face of two other Australian heads which the University Museum also owes to the generosity of Dr. Ramsay Smith. In the following table the measurements of the nose in these three specimens, as well as in a full-blooded negro head obtained from the same donor, are given:—

MEASUREMENTS OF THE NOSE IN THE THREE AUSTRALIAN NATIVES AND ONE NEGRO.

	Boco.	Australian A.	Australian B.	Negro.
Height (from nasion to sub-nasal point).	46	50	48	46
Depth (from tip or point to sub-nasal point).	20	21	16	20
Length (from nasion to tip or point).	45	43	41	44
Breadth (measured across the widest part of alae).	43	40	45	44

---

[1] Since the above was written, the position of the bregma has been determined by making a mesial incision through the scalp and Schwalbe's bregma angle has been found to be 60°.

The nasal indices in these specimens are the following: Boco 93·4; Australian A. 80; Australian B. 93·8; and in the Negro 95·6.

The relative breadth of the nose in the Australians is, therefore, not so great as in the single specimen of a negro examined, and this is in accordance with the general belief on this matter. It should be mentioned that in Australian A. the nose has been somewhat distorted in course of transmission from Australia, so that the measurements are not so reliable as in the case of the other specimens. To some extent this may account for the low nasal index in this head.

Spencer and Gillen give the measurements of the length and breadth of the nose in a series of twenty male native Australians, and when these are expressed in terms of the nasal index we get the following result:—

	Nasal Index.	No. of Individuals in each group.
Group 1	79 to 86	4
„ 2	91 to 98	12
„ 3	102 to 104	4

It is evident that there is a considerable amount of variation in Australian aboriginals in this respect, more indeed than I had expected, but the greatest number of examples are ranged in the immediate vicinity of the index 94. One individual amongst the twenty measured by Spencer and Gillen (Male 11) presented an index of 79 almost the same as that determined for Australian A. of my series.

Norma Lateralis. Plate X, Fig. 9.

The profile view of the head of Boco is seen in Fig. 9, Plate X. The marked projection and massive strength of the zygomatic arch is a prominent feature of this aspect of the head; with this is associated the high position on the side of the cranium of the temporal ridge, bespeaking a more than usually powerful temporal muscle. The projecting zygomatic arch and the high temporal ridge are both correlated with a massive, dense and weighty lower jaw. The strongly prognathous, chinless character of the face becomes evident in profile view, as also the depth of the nasion-notch and the manner in which the eye is sheltered beneath the torus supraorbitalis.

Viewed from this aspect, the outline of the cranium recalls that of the Neanderthal cranium; but this is largely due to the extraordinary massiveness of the glabella and torus supraorbitalis and the flattened forehead. The cranial height is not great, but it is far above that of the Neanderthal and Spy crania. When the vertical height is measured from the ear holes, and this measurement is compared with the maximum diameter of the cranium, we obtain a height index of 62·5. This index, obtained by measuring the recent head, compares fairly well with the height index measured on the skull and, taking the height from the basion, Sir William Turner(⁹) gives the mean vertical index of the Australian skull as 70·4 for the male and 69·9 for the female, but in his series there are individual cases in which the index is 65 and 66.

The head of Boco, therefore, presents an unusually low height index.

But in the present case it is decidedly a better plan to follow the method adopted by Schwalbe in his exhaustive treatises upon the Neanderthal(³) and Pithecanthropus(⁴) crania. A mesial contour tracing is taken of the head and a base-line drawn from the inion to the most prominent point on the glabella (Fig. 1, p. 49). In the case of Boco the inion was discovered without much difficulty, and its position was then verified by X-Ray photography. From the base-line thus established a vertical line is drawn to the highest point on the cranial vault. The index is obtained thus:

$$\frac{\text{Calvaria height} \times 100}{\text{length of base-line.}}$$

In Boco the calvaria height index is 51·2, but, seeing that the thickness of the soft textures covering the cranium are taken in twice in estimating the length of the base-line and only once in measuring the height, it is obvious that the index of the skull would be somewhat higher. Anyway, the index is low—indeed amongst the very lowest obtained amongst the crania of recent man. The average calvaria height index obtained in this manner amongst the Queensland male natives is 61·5 and amongst the Victoria natives 61·2.

But, on the other hand, the calvaria height index is greatly higher than that of the Neanderthal and Spy crania, the average of which Schwalbe(⁵) has stated to be 41·9. Schwalbe gives an interesting table (p. 45 of his memoir on Pithecanthropus) in which he shows that in 107 skulls of different races only 12 showed a calvaria height index of 54 or below, and of these the lowest three presented an index of 52.

In the ethnological collection of the Edinburgh University there is more than one cranium with a calvaria index as low as in the case of Boco.

Before leaving the study of the profile view of the head of Boco, there are some points in the X-Ray photograph shown in Plate XI, which require to be noted. Reference has already been made to the fact that a very considerable part of the antero-posterior diameter of the cranium is made up by the projecting glabella. The photograph shows the structure of this prominence. A projecting supraorbital region is one of the more usual features of the male Australian skull, and it has been shown by Logan Turner,(¹¹) Zückerkandl(¹²) and others, that in conjunction with this the frontal air sinus is small and that the projection is consequently chiefly composed of solid bone. The Australian skull in this respect presents an approach to the gorilla and chimpanzee type of supraorbital arch. This, however, is not the condition present in the head of Boco. The torus supraorbitalis and glabella, as may be seen in the photograph, are excavated by a huge air sinus, and in this respect they depart from the usual Australian type. It is interesting to note that the maxillary sinus or antrum of Highmore is also large.

The high degree of prognathism is likewise brought prominently out in the X-Ray photograph, as well as the large size of the molar teeth and the deficient mental eminence. A point of general interest consists in the fact that the arteries of the neck and the cerebral arteries within the cranium stand out very clearly.

Norma Verticalis. Plate X, Fig. 10.

The outline of the head as seen from above is long and narrow, and the cephalic index is as low as 66. The head is thus hyperdolichocephalic, although it must be borne in mind that the index is much reduced by the great glabellar projection. This contributes a spurious addition to the long diameter of the cranium.

Sir William Turner(9) states that the mean cephalic index of the male Australian skull is 69. Two skulls in which there was no premature synostosis of the sutures presented a cephalic index of 65 and 66 respectively.

From this point of view of the head the approximation of the temporal ridges and the consequent reduction of the minimum frontal diameter are very apparent. (Fig. 10, Plate X.)

THE EXTERNAL EAR. Plate IX, Figs. 2–7.

The external ear is distinctly human in all its elements and parts, although it also exhibits in a small degree certain anthropoid characters; further, if we are to regard the human auricle as undergoing a process of retrograde development, the Australian ear has apparently proceeded along this path to a greater extent than the European ear. It has not, however, reached the stage of regression which has been attained in the gorilla, and it stops far short of the extreme stage exhibited in the orang.

In all the three Australian heads in the museum the ear lies flat against the side of the head. The helix is well folded, and in Boco and Australian A. the infolding is carried down as far as the lobule. In Australian B. the folded part of the helix extends only half-way down the posterior border of the ear. A notable point in Boco and Specimen A is the great breadth of the lower portion of the front or ascending limb of the helix. This is a character present in the ear of the gorilla and still more so in the chimpanzee.

Darwin's point is strongly marked in Boco, and it springs from the folded margin of the helix by an unusually broad base; in the other two Australian specimens Darwin's tubercle is very feebly expressed. Schwalbe(6) has shown that this tubercle may be recognised in varying degrees of development in 73·4 per cent. of European males and in only 32·8 per cent. of European females. Keith(2) states that it is present in 26 per cent. of gorillas.

In the two specimens of gorilla ears which I have used for comparison with the Australian ear there is not a trace of the tubercle; whilst in the two orang ears employed for a similar purpose it is well marked.

The crus helicis crosses the somewhat restricted concha in the Australian ear to a greater extent than is usually the case in the European ear and divides this hollow more completely into an upper and a lower part.

Perhaps the most suggestive part of the Australian ear is in the region of the crus anthelicis inferius. In the instructive and elaborate papers of Schwalbe we are taught to regard the crus inferius and the part of the stem of the anthelix adjoining the lobule of the ear as the most primitive parts of the anthelix system. These parts alone are present in the lemur. The morphological independence of the crus inferius is indicated in both the chimpanzee and the gorilla. In the former it is generally (at least this is the case in my numerous specimens) completely or partially separated from the anthelix; in the gorilla the union is not complete. Further, in the chimpanzee it is usual for the crus of the helix to turn spirally upwards and become continuous with the detached crus inferius of the anthelix—the two forming a circle, the circumference of which is very nearly complete. (Fig. 6.)

In the European auricle a partial separation of the crus inferius from the stem of the anthelix, similar to the condition in the gorilla, may in rare cases be seen; but I am not aware that the continuity of the crus helicis with the crus inferius of the anthelix, as in the auricle of the chimpanzee, ever occurs. This condition is to some extent present in Boco (Fig. 2) and also more distinctly in the auricle of the Australian head A. (Fig. 3.)

The lobule of the ear is well marked in all the specimens, and in each there is a distinct tuberculum supratragicum.

MEASUREMENTS OF THE AURICLE IN THREE NATIVE AUSTRALIANS.

(Only one ear in each could be measured, as the other was distorted through pressure.)

	Boco.	Australian A.	Australian B.
Length of ear basis	52	47	48
Greatest length	63	62	68
Greatest breadth	38	45	32
True ear length (*i.e.*, from Darwin's point to the sulcus auris anterior).	28	35	25
Length of lobule	20	21	21

Schwalbe, whose lines of measurement I have followed in the above table, calculates two indices thus :—

(*a*) $\frac{\text{Greatest breadth} \times 100}{\text{greatest length.}}$ (*b*) $\frac{\text{Ear-basis} \times 100}{\text{true ear length.}}$

The first of these is termed the ear-index by Topinard; Schwalbe names the second the morphological index, and in the specimens under consideration they present the following values :—

	Ear Index.	Morphological Index.
Boco	60·3	185·7
Australian A.	72·5	134·3
Australian B.	47	192

I question very much if these indices possess any real importance in establishing racial distinctions, and a study of the figures given by other observers tends to confirm me in this opinion.

The photographs which illustrate this paper (with the exception of the X-Ray photograph) are the work of Mr. W. F. Buist, to whom I wish to express my great indebtedness.

MEASUREMENTS OF THE HEAD OF AN ABORIGINAL AUSTRALIAN (BOCO).

Cranium.

Maximum length	200 mm.
Maximum breadth...	132 „
Minimum frontal diameter	91 „
Circumference	555 „
Longitudinal arc (from nasion to inion)	347 „
Transverse arc	310 „
Vertical height (from ear-holes)	125 „
Frontal radii from ear-holes—	
to glabella	117 „
to ophryon	114 „
to maximum point of frontal curvature ...	117 „
Occipital radii—	
to occipital point	111 „
to inion	98 „

Face.

Upper face length (incisors gone)	64 mm.
Total face length	114 „
Maximum interzygomatic breadth	145 „
Intermalar breadth	124 „
External orbital breadth	116 „
External ocular breadth	92 „
Internal ocular breadth	35 „
Gonial breadth	135 „
Orbito-nasal breadth (tape)	135 „
Facial radii from ear-holes—	
to nasion (upper nasal radius)	100 „
to lower margin of nasal bones in the mesial plane (mid-nasal radius)	110 „
to tip of nose (lower nasal radius)	115 „
to alveolar point	104 „
to point of chin	111 „

The above are the measurements recommended by the Anthropometric Committee of the British Association.

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9. *Turner*—"Report on the Human Skeletons—Crania," "*Challenger*" *Reports*, vol. x, part xxix.
10. „ "Additional Note on the Neanderthal Skull," *Quart. Journ. of Science*, Oct., 1864.
11. *Turner* (*Logan*)—"The Accessory Sinuses of the Nose," Green & Sons, Edin., 1901.
12. *Zückerkandl*—"Normale und pathologische Anatomie der Nasenhöhle und ihrer pneumatischen Anhänge," Band 1, 2 Aufl. 1893.

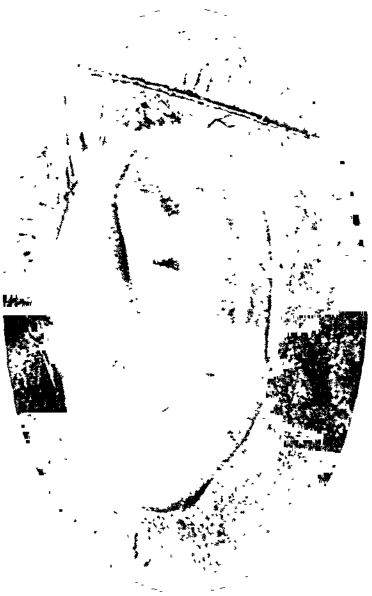

FIG. 2.—EXTERNAL EAR OF BOCO.

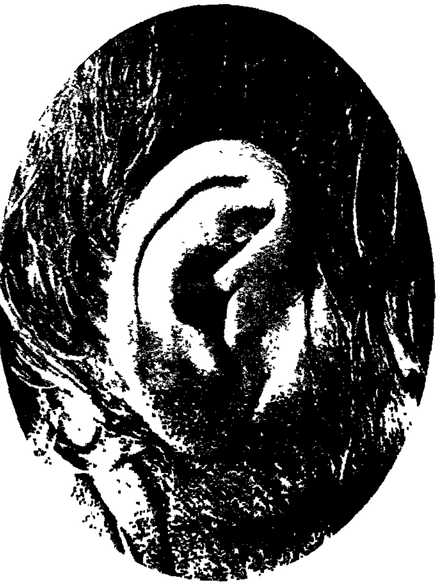

FIG. 4.—EXTERNAL EAR OF AUSTRALIAN (B).

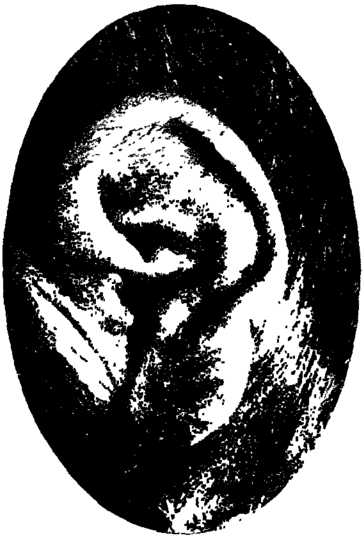

FIG. 3.—EXTERNAL EAR OF AUSTRALIAN (A).

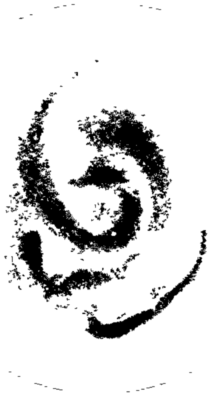

FIG. 6.—EXTERNAL EAR OF CHIMPANZEE.

FIG. 5.—EXTERNAL EAR OF GORILLA.

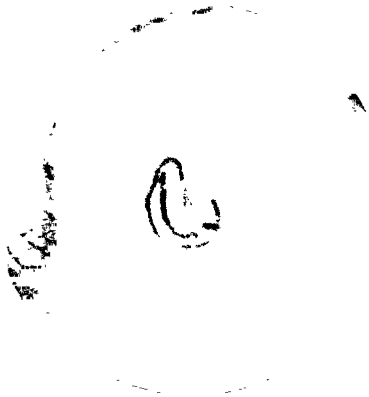

FIG. 7.—EXTERNAL EAR OF ORANG.

THE HEAD OF AN ABORIGINAL AUSTRALIAN.

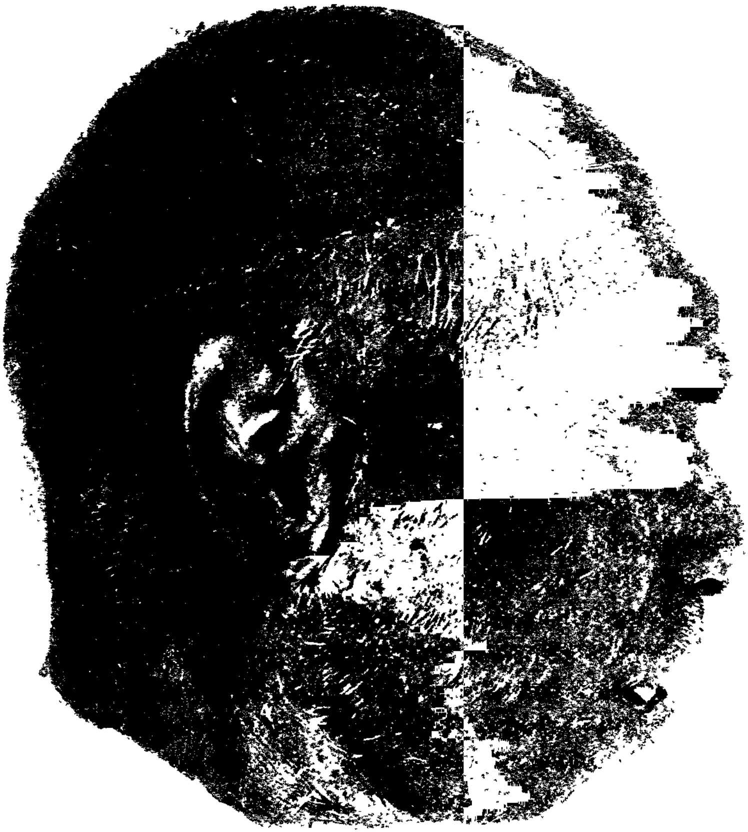

FIG. 9.

FIG. 8.

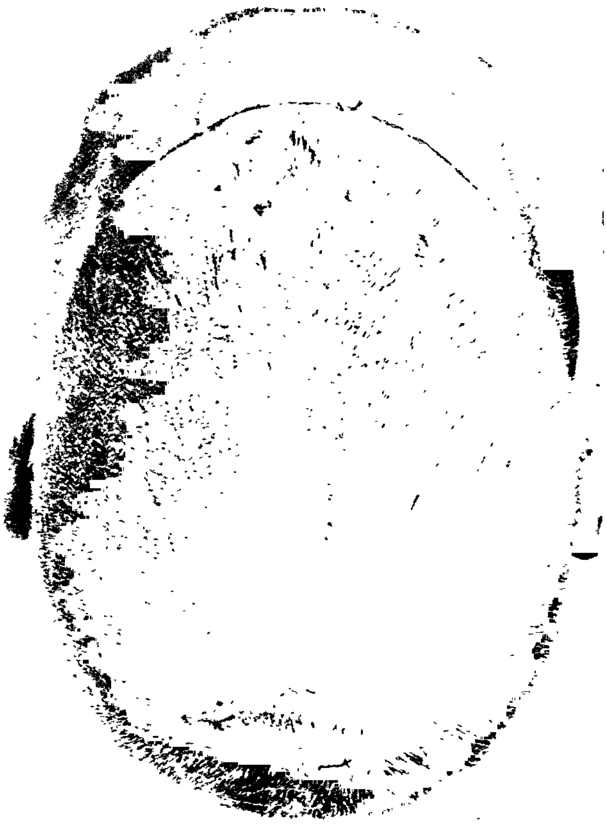

FIG. 10.

THE HEAD OF AN ABORIGINAL AUSTRALIAN.

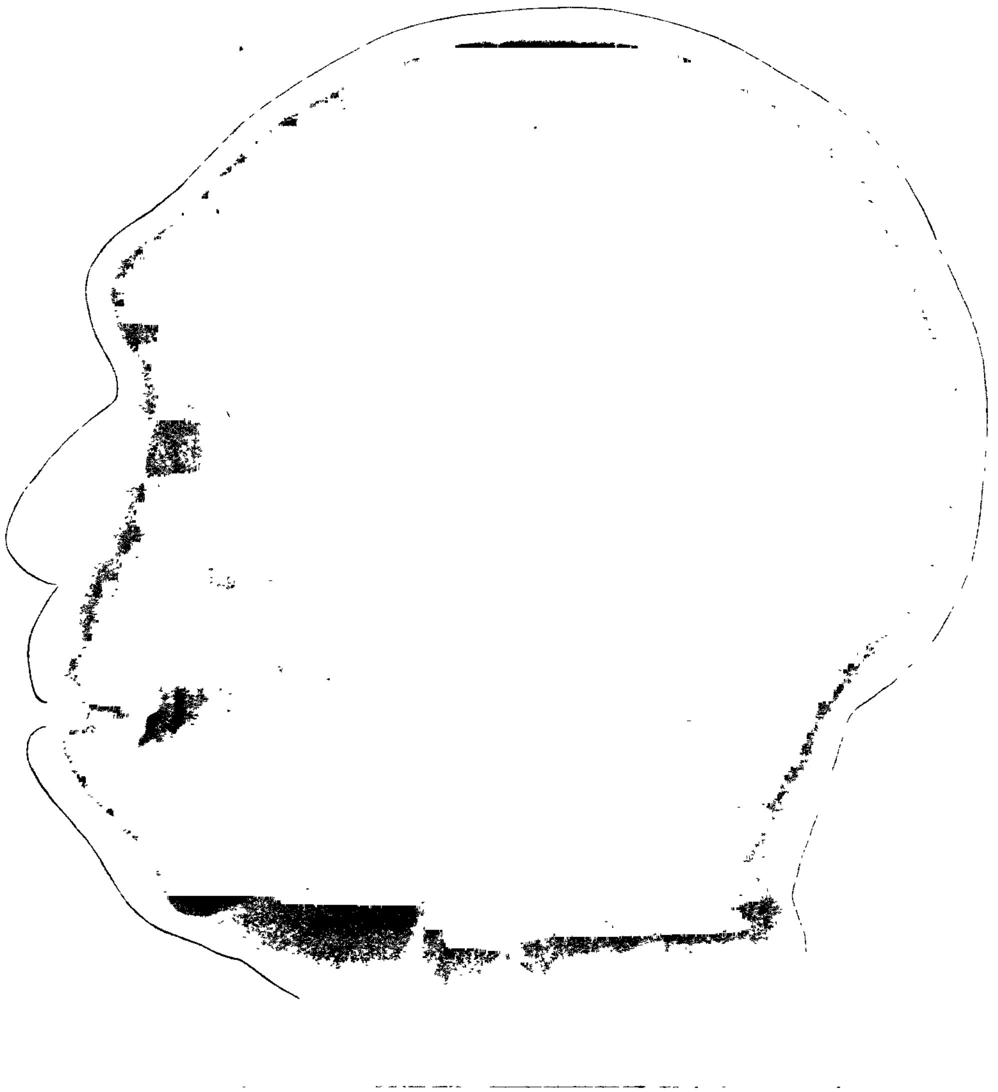

FIG. 11.—X-RAY PHOTOGRAPH OF THE HEAD OF AN ABORIGINAL AUSTRALIAN (BOCO).

THE HEAD OF AN ABORIGINAL AUSTRALIAN.

Explanation of Plates.

PLATE IX.

Fig. 2.—External ear of Boco.
Fig. 3.—External ear of Australian (A).
Fig. 4.—External ear of Australian (B).
Fig. 5.—External ear of Gorilla.
Fig. 6.—External ear of Chimpanzee.
Fig. 7.—External ear of Orang.

PLATE X.

Fig. 8.—Front view of the head of an Australian Aboriginal named Pokallie or Boco from Haddon Downs.
Fig. 9.—Profile view of the same.
Fig. 10.—Norma verticalis of the same.

PLATE XI.

Fig. 11.—X-Ray photograph of the head of an Australian Aboriginal (Boco).

THE NILOTIC KAVIRONDO.

By G. A. S. Northcote.

The Nilotic Kavirondo, or Jaluo as they should more properly be called, who inhabit the north-eastern shore of the Victoria Nyanza, belong to the same family as the great Dinka tribe of the Soudan and are near relations of the Aluri and Acholi tribes which live on both sides of the Nile near Wadilai, the differences being far less marked than those between two adjoining Bantu tribes usually are.

In all probability, therefore, the Jaluo originally formed one tribe with the Acholi. What their reasons for migration were cannot be ascertained, but probably it was due to overcrowding or to a dispute about the chieftaincy. The natives themselves can throw but little light on the matter: they state that they came from the north-west under one big chief and that when they *again* became too numerous they split up into smaller chieftaincies. The fact that they lay stress on their again increasing numbers points to the conclusion that overcrowding was their motive for migrating; but as will be seen later, they use secession as their chief weapon against an unpopular chief. Had they been driven out by conquest there would be abundant traces of such a cause, but no such signs are visible.

In appearance the Jaluo are a fine race, not so much remarkable for beauty of face as for stature and development. They are a large-boned and deep-chested tribe, somewhat fleshy and very muscular. They present a great contrast in this last respect to the other Nilotic tribes in British East Africa, the Masai, Nandi and Lumbwa. All four are capable of great endurance, but none of the last three named can claim to be a muscular race. The superior physique of the Jaluo is probably due mainly to their agricultural and industrial habits and to the fact that their food is mainly vegetable, while up to the great cattle plague of 1883, the Masai, Nandi and Lumbwa lived entirely upon animal food.

Facially the Kavirondo have rather squat noses, large mouths and big wide-opened eyes. The everyday dress of the men consists of a goat skin hung over the right shoulder, or of nothing. In most cases they have quantities of iron wire on their legs and arms and strings of beads round their necks. The women are usually completely nude, except that married women wear a small grass tassel behind, hanging from the waist; latterly, however, they have taken to wearing a strip of cloth round the waist about six or eight inches in breadth and only just meeting in front.

The tassels are discarded when a woman's husband dies and cannot be again worn until she is re-married. It is significant of the respect which the Jaluo have towards marriage, that anyone who touches this tassel has to pay a fine of three goats to the husband.

The women do not wear iron wire to the same extent as their husbands and brothers. These may frequently be seen with from six to ten pieces wound round their arms and legs, which shine from constant rubbing and polishing with oil and fat. Happily there are signs that this wire is going out of fashion, whereby they will be spared the sores and ulcers which are its continual accompaniment. Trade generally will thus be put upon a sound cash basis instead of resting as it has done upon a precarious footing of barter. The Jaluo, who are keen traders, have begun to realise the advantages of the rupee over the iron, being helped to this conclusion by the necessity of having to pay three rupees a year for every hut.

The Jaluo full dress is very striking. A huge hat of monkey or goat skin, or of feathers, often of ostrich, surmounts a well-oiled visage which is ornamented by lines of small white beads across the forehead, nose, upper lip and chin and fastened behind the ear. Round the neck are strings of beads, brass cartridge cases, fetishes, and a round or two of iron wire. Across the chest and sometimes down the back are rows of cowries sewn on to strips of leather; and over the right shoulder hangs a big black feather boa, or an ornament made of the long hair from the wildebeest's tail. The everyday goat skin is discarded. Round the waist they fasten strings of iron beads which they manufacture from iron wire; the iron has an extra polish, and from it depend bunches of feathers. The body is well oiled and sometimes covered with red clay or charcoal. Finally they fasten to the knee and ankle small bells made of iron wire in the shape of broad-bean pods and with one or two small iron beads inside.

Their weapons consist of a spear with a long haft and a short blade, a Masai sword on the right hip and occasionally a bow and arrows instead of the spear. Their shields are very large and heavy, made of buffalo hide and of a peculiar shape; vertically they are about three feet six inches in height; horizontally nearly six feet in length and curved back so that the left side, back and front of the warrior are covered; they are painted red, white and black, often in artistic designs. These designs probably at one time indicated to what family the owner belonged; to-day, however, this idea, if it ever existed, seems to have quite disappeared, each man painting on his shield the pattern which pleases him most. Further investigation on this subject should be made in order to make certain whether the patterns have any peculiar meaning.

Some wear the hair long, twisting it into long thin strings and dressing it with oil and red clay or charcoal. Others partially shave the head, always leaving at least one little tuft, which is cut off and worn by the chief mourner at the owner's funeral. Sometimes the body is striped or spotted with yellow clay in imitation of the zebra or leopard.

Politically the Jaluo are in a semi-feudal state; the tribe is divided up into larger or smaller chieftaincies or clans, which correspond to the old baronies, but there is no one overlord to make the resemblance complete. Nominally the chiefs have absolute power, but in reality their influence is not great. Each chief subdivides his territory, placing each portion under a sub-chief. These sub-chiefs or headmen are supposed to attend frequently at the chief's village in order to hear and carry out his orders. If a crisis arises, an informal council of the heads of the village is called and the *patres familiarum* can express their views, though the decision rests with the chief. There is no kind of voting. This council will also assemble if the rule of the chief becomes intolerable. They may threaten to secede, but their resistance is always passive; the usual result, however, is that one or more of the headmen set up as chiefs on their own account, and quietly disregard the orders of their *quondam* superior. Land is held in common by the members of each clan, but jealously guarded from subjects of all other chiefs. A man may, and frequently does, move from one clan to another, but in that case he has to obey the orders of the chief to whose clan he has attached himself. There are no formalities attendant on such a change.

Trespass by the members of one chieftaincy upon the land of another is indeed the usual cause of the frequent small quarrels which arise and very often lead to bloodshed.

Internally, however, private ownership of land has to some extent made its appearance. The Jaluo village represents a family, the headman being the father or (if he be dead) the eldest brother. Besides his family he will, if he is a chief, or sub-chief, generally shelter one or two retainers whom he calls his *askari*,[1] police. When the time comes for laying out the *Shamba*[1] or agricultural land, each adult male and female marks out and tills his own piece, the married women being helped by their daughters and younger sons; although the family in practice share the produce, theoretically the crop from each plot belongs to the member who tilled it; thus, if one of the sons wishes to sell some grain he can only sell what he has grown himself, and, similarly, one *askari* reaping what another has sown would be considered a thief.

Cases occasionally arise which illustrate this: if A's cattle or goats wander into B's *shamba*, though A and B live in one village, B claims compensation. Private tenure is, however, only temporary. If a village uses a certain piece of land for a year and then leaves it, another village may cultivate there; but as the *shambas* are usually close to the villages, and villages are separated by some little distance, such cases of appropriation are practically unknown. The rights, however, to a certain piece of land are only squatter's rights and confer no claim *in perpetuo*.

In shape the Jaluo village is circular and is fenced round with euphorbia bush, stone or mud walls, or watling, as may be most convenient. In the centre is the cattle pen; around this are the store houses of basket or wicker work; they are raised some two feet from the ground and are about five feet high and three feet in diameter; there is a small opening near the top sufficient to allow a man's head and shoulders to enter; the roof is of grass. Outside these again is the circle of huts, strongly built of sticks and grass and with the sides plastered with a mixture of dung and mud. Each married male in the village has his own hut, and besides this a hut for each wife and two smaller huts, one for his sons and another for his daughters, which latter live with an old woman, often their grandmother. The two sexes are kept rigidly apart, and though, as will be seen, the Jaluo notion of morality is scarcely the same as the European, there is little of the promiscuity of intercourse among the Kavirondo which is so noticeable a feature among the other Nilotic tribes of British East Africa.

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[1] Swahili word adopted.

As the sons grow up they marry and build houses in the father's village for themselves and their wives. The eldest son usually remains with his father for good and all, but as the other sons in turn become fathers of families, they often build villages for themselves near the paternal village; as often as not, however, the sons keep together after the father's death, the eldest becoming the head of the family.

There is a strict law of exogamy among the Jaluo, though a son may marry his father's wife if she is no blood relation of his; similarly two sisters are often simultaneously the wives of one man.

Their rule of inheritance, though apparently complicated, is really simple. The husband sets aside so many of his cattle to provide food for each wife, the chief or first wife naturally having a larger share than the rest. On his death the wife and the cattle set aside for her pass to her sons, her eldest son as the new *pater familias* again getting the larger share. If a man has no sons by the first wife but sons by another, all the property, including the first wife and her daughters, pass to these sons; if a man has no sons, all his property passes to his brother or nearest male blood relation; females can own no property, being themselves but chattels. On the death of a chief his power descends upon the eldest son of his first wife, even though his second or third wife may have borne him a son before the son by the first wife was born; *i.e.*, A is his first and chief wife and E his second. A may bear him two daughters, B and C, and then a son D. Though in the meanwhile E has borne him a son F, D will become chief in virtue of his mother's priority, even though he has an elder brother (F). But if D is not of fit age to govern, F may become chief, as a regency is too advanced an institution; and similarly if both D and F are infants, some elder blood relation, such as their eldest uncle, will succeed their father. This rule not unnaturally leads to much quarrelling, as, when the dispossessed heir grows up he often lays claim to rule, with disastrous results.

A great many formalities attend a Kavirondo marriage. As has been remarked above, exogamy is the strict rule. The young man having declared his choice to his father, the latter goes off to the girl's father and arranges the dowry. He then returns, and the intending bridegroom goes over with a bull or some goats as earnest money and partakes of the preliminary feast, an essential feature of this being an offering set aside for the sun-god, consisting of a little meat, part of a chicken, some *mtama*[1] and some native beer. He goes away again, having had no intercourse with his intended, and returns in a few days' time and goes through the form of carrying her off; she stops at his village for some days and the important rite of cooking the first dinner for him is gone through; this may be taken to intimate that she accepts him as her husband. She then goes home and the husband pays a portion of the dowry; he comes again and carries her away and pays another portion, and so on, till the dowry is paid off and the bargain is ratified. Should the woman prove childless, or if she dies shortly after the marriage, the dowry can be reclaimed by the husband, though it is more usual for her sister to take her place. Should she, at the time of marriage, be possessed of children, legitimate or otherwise, they become her husband's property. The dowry is also recoverable if the woman deserts him for another man.

Children are sometimes contracted for marriage at a very early age, but in such a case, the girl remains with her parents until the age of puberty. The value of the dowry has greatly decreased since the cattle plague of 1883, but is again increasing. Before that date twenty head of cattle, besides goats, grain, etc., was not uncommonly asked and obtained. To-day seven head of cattle is a handsome "dot," and the price has been known to fall as low as one bull and twenty goats, though a heifer and a bull is the usual minimum. The birth of the first child is also an occasion for a feast; frequently, a child is named after the hour at which it was born, *e.g.*, *onyango*, morning; *oching*, noon; *odiambo*, afternoon; *otieno*, night. On other occasions some deceased relative appears to the mother in her sleep shortly before birth, and his name is adopted; or, if a child be born posthumously, the father's ghost appears and dictates the name. The Jaluo are very fond of nicknames, which are often passed on to descendants, though their significance is lost; *e.g.*, *obele*—the man who owned much *mtama*; *olieeh*—the man who killed an elephant. Other nicknames are given on account of some personal peculiarity; *e.g.*, *obonyo*—the man like a locust.

A funeral, however, is the greatest ceremony of all. While the sick man is dying his relatives howl in chorus round his hut, while the doctors rattle stones in gourds and puff clouds of tobacco smoke around the invalid, their object, undoubtedly, being to drive away the evil spirits. Next day there is a great dance, at which all the deceased's relations and friends turn up; if the dead man is a chief the whole clan is represented. Every man is dressed in full war paint and brings his best bull along with him. For a while they stay in the village lamenting, while the mother or chief wife of the deceased adorns herself with the dead man's goat skin and his tuft of hair, as mentioned above, and then runs round and round the village rattling a gourd and singing incantations. Then the visitors come out, having refreshed the inner man with beer and tobacco, and proceed to charge up and down, hanging on to their bull's tails and pricking the unfortunate beasts to encourage them to go faster. When thoroughly exhausted they collect together again, and singly or in twos and threes run out and go through a fight with some invisible foes, again presumably, the evil spirits. They are very serious all the while, and the rest watch in silence their champions as they charge, retreat and cower down behind the huge shields. Then comes more feasting, with the customary offering to the sun, and finally they disperse.

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[1] Millet.

The wailing is kept up in the case of a chief for six days, and performed twice a day at sunrise and sunset, but after the day of the dance each village mourns by itself; for a common person three days is the limit.

The corpse is buried in a recumbent position in the deceased's hut, but the hut continues to be occupied, generally by the deceased man's heir; it is not at once destroyed or disused, as some authorities, among them Sir C. Eliot, maintain. Last of all, when the mourning is over, an offering of beer, grain, and chicken flesh, is put on the grave.

The Jaluo religion is extremely slight. They worship the sun, and to a less extent the moon. They regard the sun as a deity seldom beneficent, more often malignant, and usually apathetic; as one of them said to the writer, "It does not matter how much you pray, you fall sick and die just the same." The offerings made at all important occasions in their daily life they make more with the idea of appeasing him than of obtaining positive benefits.

Witchcraft, however, and demonology occupy their minds far more. The wizard is greatly dreaded, and it is easy for an unscrupulous Kavirondo to obtain his neighbour's property by accusing him of having killed one of his relations by witchcraft, knowing that he will have his neighbours' support and sympathy. The wizard is sought both for good and evil purposes; his aid is invoked alike to detect criminals and to do harm to an adversary. In a recent case brought before the writer a man was accused of having murdered one of his wives by witchcraft. According to his accusers, the supposed murderer missed his razor and accused two of his wives of the theft. They both denied all knowledge of the missing article, and he gave them till the evening of that day to find it. When their term of grace came to an end, and the razor was not produced, he was alleged to have struck one of his wives, who was on the point of bearing a child. He then produced two charms which he affixed to their respective huts, threatening that the thief would be detected by the charm and would die. Next day the woman who was said to have been struck died after producing a still-born child. The curious result was that the man was tried for murder, the accusers believing that the crime had been committed by witchcraft, and the magistrate holding that, if the man caused his wife's death at all, it was by the blow which he was alleged to have given her. The blow turned out to be a myth, and the man was discharged, much to his accusers' disgust.

When a Kavirondo wishes to kill his enemy secretly, the usual method is to bury a dead rat or chicken at his victim's door. If, when the latter comes out the next morning, he treads on the spot where the animal is buried, it is believed that he will die that day.

The evil eye, it is claimed, can make a sound man sick, and kill a man who is ill, or an unborn child. Most diseases are attributed to the evil eye or to malignant spirits, and so the best remedy is to make as much noise near the sick man as possible, in order to drive the evil ones away. In addition to this universal remedy, the Jaluo use a considerable variety of herbal medicines, and they are also expert at wet and dry cupping. Sometimes, however, the treatment is of a distinctly quack nature. Some time ago a native practitioner brought a case of assault against the husband of one of his patients. The defence set up was that the accused called in the prosecutor to treat his wife, and that the latter, after much cogitation, ordered the woman to climb to the roof of her hut and stay there till she was better. Unfortunately, the patient died under her open-air cure; her husband laid her death at the doctor's door and took steps to settle his account with the professor of healing arts, with a club. On another occasion the writer was summoned to an accident in the lime quarry in the district. One of the injured was suffering from a broken thigh and internal injuries. He put on a temporary splint, sent for the Indian apothecary, and gave orders that the patient was not to be moved in the "interim." Next day, however, the apothecary found, on arriving at the scene of the accident, that a Kavirondo surgeon had been called in; the latter was much puzzled by the complications of the case, and, in order to make a better diagnosis, cut the man open, with the not unnatural result that he died.

But, although the wizard is held in abhorrence and dread, the rain-maker is greatly esteemed: his success probably depends upon a knowledge of the signs of the heavens, but his methods are as follows: His village is to be found as a rule near a big tree, which he asserts is sacred; when rain is wanted he gathers some herbs and puts them in a large pot containing water, which he boils beneath the holy tree. Of the decoction thus prepared he draws off a little into a smaller pot, above which he squats on his haunches. Next a reed is produced, and through this the rain-maker draws up a little of the liquid and then squirts it forth into the air after blowing through the reed and causing the fluid in the pot to bubble: the whole process being punctuated by voluble mutterings and *abracadabra*. A reputation for uncanny powers, however, can be obtained even more easily than this, as the following anecdote will show. Some time ago, during the lesser rains, the natives of the valley in which the writer's station is situate, came and complained that a famous rain-maker was deflecting all the rain to the hills, so that the crops in the valley were dying. Would the Bwana (master) send a policeman and arrest the evil-doer? The Bwana did not see his way to such an arbitrary proceeding, but, being curious to see the wizard, scribbled a few crooked lines on a sheet of paper and told the applicants to show this to the rain-maker as a sign that the Bwana wished to speak with him. Next day they came back and said that the wizard had refused to come for the reason that the letter was not genuine but had emanated from an Indian shopkeeper; the writer told them to wait a few days, meaning to postpone the matter *sine die.* It so happened, however, that that evening a tremendous storm of rain broke over the valley, and next morning the complainants were back again to point out that his refusal to come in at the Bwana's summons had so frightened the rain-maker that he had sent rain next day, and to offer most hearty thanks for the white man's beneficent interference.

Though the Jaluo have good manners on the whole, some of their customs are decidedly the reverse of civilised. In common with the other Nilotic tribes of British East Africa, they draw blood from the living cattle and drink it. The custom, however, has its justification, for in many parts of Kavirondo this is the only method by which the natives can obtain salt. Also the older men are confirmed drunkards and hemp smokers, which causes them to age very quickly and probably shortens the average term of life.

Those who dwell on the shores of the great lake and of the larger rivers are expert fishermen: they catch fish with rod and line, a sunken trawl line, in weirs, by woven grass substitutes for nets, and by spearing them with four-pronged wooden spears which they throw with extraordinary accuracy. They are also keen huntsmen, though of little use out shooting, and possess highly trained dogs which will run down an oribi or hare or find a wounded guinea fowl knocked down by their throwing sticks.

In character they are naturally very honest, except with regard to cattle, a temptation which no East African can withstand. They are extremely jealous of any relations between their women and men of other tribes, nations or colour; but among themselves an unmarried woman who has reached the age of puberty may have as many friends, as they call them, as she likes, provided that they come from another clan; after marriage she must confine her attentions to her husband.

Perhaps their most pleasant trait is their love of fun and laughter: the feeblest joke or the slightest bit of horse-play will set them in roars of laughter. For hospitality and industry they have a well-earned name; they are, in fact, in every way most amenable when treated with a little kindness and consideration. They have a considerable knowledge of blacksmith's work, though the spears which they turn out cannot be compared with those of the Masai for fine work. With the latter tribe, however, they show a well-developed artistic sense, the designs on their shields being generally handsome and well carried out. They are also very fond of music—of a kind: they play upon an eight-stringed harp, which is mainly used to provide an accompaniment to their extempore songs, composed in the heroic or comic vein.

Speaking generally and comparatively they are a peaceful, non-aggressive folk, though the common impression that they are cowards is ridiculously wrong: in the writer's small experience of African tribes they have shown themselves better fighters than the much-lauded Swahili, and better policemen than the dreaded Masai; they are certainly more amenable to discipline and less inclined to prefer their own wisdom to that of their officers.

On the other hand they are most painfully litigious: civil cases which arose in the time of their grandfathers are constantly brought for hearing, and the complications which ensue would bewilder the most legal mind.

The adaptability which they show in learning the lower stages of all kinds of work is a hopeful sign for the future. To the writer's knowledge they are now employed as soldiers, sailors, police, masons, carpenters, sawyers, blacksmiths, gardeners, and boys. In none of these occupations can they be said to excel at present, though at the head-quarters of the Kavirondo Province, Kisumu, the native sergeant instructor is a Jaluo and does his work very efficiently; but, on the other hand, it is only during the last four or five years' time that Kavirondo and the Jaluo have been taken seriously, and for this short time they show a great progress.

Combining as they do an undoubted industry and keen trading character with a surprising quickness to learn the lessons of civilisation, *e.g.*, their ready change from trade goods to cash in commercial matters or their almost immediate recognition of the advantages which may be gained by taking their disputes to the Station for settlement, the Jaluo give us every reason to hope that in them we have a valuable subject race, the study and consideration of which will in a very few years bring to the Protectorate Government a great and enduring profit.

THE FRICTION-DRUM.

By Henry Balfour, M.A.

[With Plates XII-XIV.]

A peculiar form of sound-producing instrument—which I hesitate to describe as a musical instrument, since its special prerogative as a noisy toy is the production of loud and inharmonious rather than musical sounds—is very prevalent throughout Western Europe, and, under some of its modifications at any rate, is familiar to most of us. In its essentials it consists of a small drum with a single membrane or drum-head, to the centre of which is attached one end of either a string or horsehair or else of a small stick, the other end being free. To produce sounds, the fore-finger and thumb, previously wetted or rosined, grasp the string or stick and are drawn along it. The friction creates rapid vibrations, which are communicated to and are taken up by the drum-head membrane, a loud and usually unpleasant sound resulting, which is intensified by the resonant hollow of the drum.

It may be thought that so simple and undignified an instrument is scarcely worthy of being discussed seriously, and yet the method by which its notes are produced is peculiar and unusual, and moreover, a study of its geographical distribution brings us face to face with an ethnological problem of some little difficulty. It seems certain, too, that this instrument can claim a respectable antiquity, and it is equally certain that, in spite of its present degenerate use amid modern civilised surroundings, it has seen better days, and has been of some importance in an environment of lower culture.

Some years ago (1895) this instrument was brought prominently forward in a discussion, maintained during some months in *Notes and Queries*, concerning the "bull roarer," an instrument with which one form of the friction-drum is frequently confused. Dr. J. D. E. Schmeltz, in his interesting paper "Das Schwirrholz," also refers to this noise-making toy. It is probable, however, that its association with the "bull-roarer," or "whizzing blade," is purely fortuitous, and it is certain that there is no morphological connection whatever between the two instruments.

The earliest mention which I have hitherto found of the friction-drum—to give the instrument the descriptive name which I propose for this group—is by F. Marinus Mersennus (Père Mersenne)[1] in 1636. Under the heading "Instrumenta Indica atque Sinensia" the following passage occurs, "Hic etiam additur olla, quam vocant *Romme le pot*, cuius cavum pelle ovina regunt instar timpani, circumligato prius baculo in illius medio, cuius violentus versus fundum ollae impulsus, and eductio bombum rhythmicum rusticis tripudiis accomodar." This is accompanied by a figure which I reproduce (Fig. 1) and in which is seen a round, wide-rimmed pot covered with a drum-head of sheep-skin, to the centre of which is fixed one end of a small stick which carries two pellet-bells. By rubbing the hand rhythmically up and down the stick, the membrane was thrown into vibration and emitted notes to accompany rustic dances. Although Mersenne describes this amongst Oriental instruments, I have reason for believing that his instrument was a European one, for his figure corresponds closely with one of the familiar Italian and Dutch types, which were certainly in common use in the seventeenth and eighteenth centuries, as we shall see later. The name *romme le pot,* too, is the ordinary Dutch name for the instrument. The reference is important as showing that the friction-drum was known in Europe early in the seventeenth century.

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[1] *Ordinis Minim. Harmonicorum Libri*, ed. 1636 in Latin, 2nd book. *De Instrumentis Harmonicis*, p. 111. Neither Virdung (1511) nor Prætorius (1618) refer to this instrument.

GEOGRAPHICAL DISTRIBUTION AND VARIETIES OF FRICTION-DRUMS.

The varieties under which this instrument occurs have a wide distribution. I have records of them from West and Central Europe (including Great Britain), North and South America, Africa, India and Japan. Under the larger geographical headings, I will now give such details as I have of the distribution within these areas, together with descriptions of the various local forms.

EUROPE.—Friction-drums were used in Europe, at any rate as far back as the seventeenth century, and in all probability earlier still. Apart from the early seventeenth century reference which I have already quoted from Mersenne, there are earlier examples depicted in old Dutch paintings and elsewhere.

Holland.—The form prevalent in Holland consists of a small earthenware pot over the wide mouth of which is stretched a piece of bladder. One end of a small stick is fastened to the centre of the membrane, the other end standing erect. The stick is rubbed with the wetted or rosined hand, and loud sounds are produced. It is used mainly by children, chiefly between Christmas and Twelfth Night, as an accessory to begging[1] (Fig. 2). It goes by the name of *rommel pot,* literally "rumbling-pot" (Dutch *rommel* from *rommelen,* to rumble, a word applied also to the rolling of thunder). This, as I have already pointed out, is the name given by Mersenne to the instrument described and figured by him, which is of Dutch type. An instrument identical with the modern Dutch form is seen in a seventeenth century picture of a peasant's wedding by Jan Havicks Steen (*c.* 1626–1679) in the Hermitage Gallery, St. Petersburg (No. 901). Fig. 3 is a sketch from this picture. Fig. 4 is sketched from a picture by the same artist in the Royal Gallery at Cassel (No. 296). The same form exactly is found, according to Herr H. Leuss[2] in the Frisian Archipelago, where it is also called *rummelpott,* and is used by children.

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[1] P. M. Hough, *Dutch Life in Town and Country,* 1901, p. 96.

[2] *Globus,* vol. 84, p. 223.

Germany.—Dr. Schmeltz[1] describes the instrument as used in Germany under the name of *waldteufel.* He tells us that it was used in Hamburg more than half a century ago, at the time of the Christmas Fair, or "Christmarkt," lasting from about the 12th–31st December. The fair was at its height on the Sunday before Christmas, at about 8 p.m., when a variety of musical toys were called into requisition. Conspicuous among these was the *waldteufel,* consisting of a paste-board cylinder covered with parchment at one end. A horsehair was knotted through the centre of the parchment, its other end being looped round a notch at the end of a little stick, by means of which the cylinder was whirled round in the air, (as in Fig. 5). No doubt the stick was rosined to promote the friction which was communicated along the horsehair to the membrane. Dr. Schmeltz tells us that the *waldteufel* was not an ordinary child's toy, but was made by the poorer people in Hamburg at "Dom" time and sold in the "Christmarkt" for the special occasion. Dr. A. C. Haddon tells me that this form of whirling friction-drum is widely dispersed through Germany. He mentions Mainz, and obtained from Leipzig the specimen shown in Fig. 6, in which the horsehair connecting the membrane and the twirling-stick is double, passing through two holes in the drum-head. A specimen, also Dr. Haddon's, from Eibenstock in Saxony, is of the usual single-string variety.

Roumania.—A friend of Dr. Haddon's has collected examples in Roumania. One type resembles the French example shown in Fig. 7 and has cylinder 60 cm. long and 40 cm. wide, with horsehair and twirling stick. This is called *biciŭ* (pron, bitsch). The other type is practically similar to the English specimen shown in Fig. 14, and is called *buhai.* They are used, Dr. Haddon tells me, in a New Year agricultural ceremony.

Belgium.—Mr. E. Lovett has a specimen from Belgium, apparently of German make, and identical with the example represented in Fig. 6.

France.—These instruments are liable to appear in France on any festive occasion, such as fairs, Mi-Carême, etc. Commonly, the instrument is identical with the German form already described. The cylinder may be of pasteboard, as in Fig. 7, or of tin, or of the shank bone of some animal, while, as in Fig. 5, the broken neck of a bottle occasionally serves the purpose.[2] The string may be of horsehair or of waxed thread, and in some is drawn through the rosined fingers, in others it is looped on to a small twirling-stick (Fig. 7). *Cri de la belle mère* is one of the popular names for the instrument. In the Trocadero Museum in Paris, there is a type which belongs to Gascony and Guyenne, having a narrow cylinder of reed or bamboo. The horsehair is double and passes through two small holes in the membrane. It is twirled on a short stick (Fig. 8). The local name is *arran.*

Italy.—The Jesuit padre, Filippo Bonanni, in his "Gabinetto Harmonico,"[3] describes and figures (Fig. 9) an Italian example of the early eighteenth century.

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[1] "Das Schwirrholz," *Verh. des Vereins f. Naturw.* Unterhaltung zu Hamburg, vol. 9, pp. 92–128, 1896.

[2] H. H. S. in *Notes and Queries,* Ser. VIII, vol. viii, 1895, p. 55.

[3] Rome, 1722, p. 121, and pl. lxxxiii.

His description of the plate runs as follows: "Il Villano quì espresso stà in atto di suonare un' Istromento usato in Italia nel tempo delle Vendemmie. E' questo formato di un vaso di terra cotta, pignatta, ò simile, il quale si cuopre con carta pecora nel modo, che si fà il Tamburro, mà prima, che ad esso si adatti, si inserisce un bastoncino, e stretamente legato con la detta carta pecora, la quale mentre si alza, e si spinge con violenza verso il fondo del vaso, come se si volesse pistare in un mortaro, rende un gran suono, mà rauco, che per l'ordinario viene accompagnato con il suono del Corno bovino, e con esso formano balli li Villani deputati al taglio dell' Uva nelle Vigne." Here (Fig. 9) we see the Dutch form repeated and used particularly by the peasants in their dances at the gathering of the grapes. This instrument still survives in Southern Italy in the same form, and is much in vogue at all merry-makings, popular processions, etc. It plays a conspicuous part at the Feast of Piedigrotta in Naples, described feelingly by an Italian writer[1] as "La gioconda festa delle canzoni e della baldoria—la festa giuliva dalla veglia sacra, ove all' ultima eco voluttuosa del canto fescennino, s'accompagna l'assordante stridìo dei tanti primitivi istrumenti d'un' orchestra infernale—. . . ." While another writer[2] enlarges upon the scene thus: "Diverse voci, orribili favelle, voci alte e fioche si alternano continue, numerose, assordanti. È un rullio incessante di tamburi e tamburelli, di trombe e trombette, nè mancano i famosi *zerr-zerr* ed i famosissimi *sceta-vajasse.*" From these passages it will readily be gathered that *noise* is a predominant feature at this festival, and the friction drums assist largely in swelling the "orchestra infernale." Fig. 10 is taken from the journal which I have quoted above; the drum here seems to be cylindrical and of pasteboard or tin. Specimens sent to me from Naples by Lord Arthur Russell and Mr. R. T. Günther. and now in the Pitt Rivers Museum at Oxford, are of the prevailing form, made from small skin-covered pots with friction sticks of cane, to which small pellet-bells are sometimes added (Fig. 11). The membrane is always bound round the pot. Mrs. J. Crosby Brown[3] gives the name of the Italian friction-drum as *pan-bomba*, a name closely resembling the Spanish one, *zam-bomba.* In her collection there are three examples, one of which has *three* friction sticks with a bell fastened to the longest.

Mr. E. Neville Rolfe describes to me the *caccarella*, used at the Feast of Piedigrotta, as a tin pot about the size of a tall hat covered with bladder and fitted with a friction reed about 2 feet 6 inches long. This kind is represented in Fig. 10.

The *cupa cupa* of Apulia is practically identical with the Neapolitan form. "The player begins by spitting two or three times into his hands, and then moves the stick up and down as fast as he can; this makes an odd droning sound rather like a bagpipe in the far distance." The writer whom I quote here saw the *cupa cupa* played upon in conjunction with several other instruments (guitar, fiddle, tambourine, etc.) as an accompaniment to dances at Leucaspide near Taranto in Southern Apulia.[1]

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[1] Francesco Pometti in *Piedigrotta*, Naples, Sept. 8th, 1891.

[2] Angelo Pesce, *ib.*

[3] *Catalogue of the Crosby Brown Coll. of Mus. Instr.*, New York, 1904, I, p. 211.

I have seen at Rome during fair time a small variety consisting of a pill-box with horsehair attached to the membrane. There was a very ready sale for it.

Spain.—Prof. T. de Aranzadi describes[2] two varieties of the instrument, one with stick the other with string (Figs. 12 and 13). He says, "The inhabitants, both young and old alike, use this instrument all night long at Christmas time in Madrid, in the houses as well as in the streets, and use it to accompany their songs, which, as a rule, are neither original, pious, nor moral. La *zambomba* is the name of the Spanish 'rummelpott.' The instrument can be made from an old, cylindrical tin can, over the opening of which is stretched a skin, to which a reed has been fastened. The smallest *zambomba* is 38 cm. long, the stick being 26 cm. and the can 12 cm. The diameter of the can is 8 cm., the price is 15 c. (Fig. 12). The *chicharra* ('little grasshopper') resembles the *zambomba,* but the stick is replaced with a cord which is well waxed. The smallest *chicharra* is 8½ cm. long, 5½ cm. in diameter and costs 10 c." (Fig. 13.) Dr. R. Wallaschek[3] mentions a Spanish form resembling the ordinary Neapolitan one, with small pottery body, membrane and stick, and indicates that it is capable of producing something better than mere unorganised noise. "When rubbed up and down," he says, "it gives out a clear note, which can be raised by pressing the finger on the membrane, so that with practice very simple airs can be played." I have not heard of the form with twirling-stick being used in Spain or in Italy, though it is so common in Germany, France and England.

England.—Two forms have been sporadically in vogue in England during the last sixty years or so, especially at fairs. The type with cylinder, horsehair and twirling stick is mentioned as having been very common in London about the middle of last century at the price of one halfpenny.[4] Mr. J. Astley[5] remembers it somewhat earlier at Coventry, where it was called the *hummer,* the name being changed to *hoo'r.* The cylinder was usually a large paper pill-box with a piece of thread fixed with a small toggle through its centre, the other end being looped round a twirling-stick. By the rapidity with which it was whirled round the sound was increased or diminished, and a well-made one would be heard for 500 to 600 yards. Dr. Haddon has a specimen of this form from Cambridge. It is practically identical with that shown in Fig. 7. This form has been re-introduced in London in the form of a machine-made tin drum with ingeniously strained parchment and turned wood whirling stick.

The type which consists of a small parchment covered pasteboard cylinder or pill-box with horsehair or string for drawing through the fingers, is also common in England and is frequently sold in towns (Fig. 14). A writer[6] from Boston,

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[1] *The Land of Manfred. Rambles in remote parts of Southern Italy,* by Janet-Ross, 1889, p. 154.

[2] *Globus,* vol. lxxxviii, p. 30, 1905.

[3] *Mitt. der Anthrop. Gesell. in Wien,* vol. xxviii, 1898, p. [2].

[4] J. C. J. in *Notes and Queries,* Ser. VIII, vol. vii, 1895, p. 98.

[5] *Notes and Queries, ib.*

[6] *Notes and Queries,* p. 457.

Lincolnshire, describes a variety long since obsolete, though formerly popular there, in which the cylinder consisted of the neck of a wine bottle. Over this was stretched a piece of parchment which was tied tightly under the projecting rim; a long horsehair was knotted through the membrane, and, when the hair was drawn through the fingers, the sounds "jack j-a-a-a-ck" or "jak jak" were emitted, and the instrument was locally known as the "jackdaw." I have already alluded to the use of a bottle-neck in France (Fig. 5).

In the Horniman Museum there are two examples from Sawtry and Abbotsby, Huntingdonshire; the one is made from the rose of a watering can, the other from an old "halfpenny-beer-horn" mug (Figs. 15, 16). In both of these the string passes downwards through the hollow of the vessel, the check-knot being outside the cylinder instead of inside, as is more usual. A specimen from St. Neots, Bedfordshire, and another from Suffolk, both made from plain, cylindrical tins, have the string similarly disposed. In none of these is there a membrane, the thin tin or horn being sufficiently elastic to provide an indifferent substitute for parchment.

Though usually a mere toy nowadays, we learn from another correspondent to *Notes and Queries*,[1] that occasionally the simple instrument served a useful purpose. He writes, "I remember, years ago, my father, who was a magistrate, taking from a poacher a partridge caller. It was a tailor's thimble with a piece of parchment stretched over one end, perforated in the middle, with a waxed horsehair run through it; this, when skilfully jerked, gave the sound like the call of a partridge, by which means he induced the birds to approach near enough to shoot them."

NORTH AMERICA.—A letter from a correspondent in the United States to Mr. J. E. Norcross,[2] describes the instrument, apparently of French manufacture, as sold in Philadelphia; a cylinder of tin or pasteboard with double thread and rosined twirling stick. In the middle of the last century they were not on sale, but were made by the boys themselves from a piece of an old kid glove, stretched over an empty spool, with a horsehair and stick. The instrument was called the "locust," because "the noise exactly resembled the song of the seventeen-year locust or cicada."

SOUTH AND CENTRAL AMERICA.

Venezuela.—"The *furuco* is a musical instrument of the Venezuelans; a piece of leather is stretched over an empty barrel, leaving an opening for a stick, which is then drawn backwards and forwards on the edge of the skin, so that the latter vibrates and a grunting sound is produced." Herr A. Ernst, from whom this passage is quoted,[3] records here a peculiar variant. If this description is accurate it would appear that the stick was not fixed to the membrane, but could pass freely through the hole, the vibrations being caused by the friction of the stick against the edges of the orifice, and not, as in most friction-drums, by the friction of the hand upon the stick. There is reason for accepting the description as a true one, as I shall point out later in dealing with some African forms.

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[1] E. Leaton Blenkinsop, *Notes and Queries*, Ser. VIII, vol. viii, 1895, p. 12.

[2] *Notes and Queries*, Ser. VIII, vol. vii, 1895, p. 158.

[3] *Zeitschrift f. Ethnologie*, vol. xviii, 1886, p. (545).

Honduras.—H. H. Bancroft mentions[1] that the agricultural Guajiqueros of Western Honduras use "a sort of drum consisting of a large earthen jar, over the mouth of which a dressed skin is tightly stretched. To the centre of the skin, and passing through an opening in the bottom, is attached a string which the performer pulls, the rebound of the membrane producing a very lugubrious sound." This instrument resembles in principle some of the English ones, to which I have referred (from Huntingdonshire, etc.), in which the string passes through the cylinder. This is also an African characteristic, as we shall see later.

AFRICA.—Turning now to this very important centre of distribution, we find certain well-defined and seemingly indigenous types of friction drums, in an environment of more primitive culture. In discussing the question of the probable origin of this group of instruments, the African forms must necessarily be regarded as being of importance by reason of their association with uncivilised peoples. To this aspect of the subject I shall refer later in my general remarks upon the material at present available for study. I will here describe the forms under which the friction drum occurs in Africa, as far as I have been able to ascertain hitherto.

Barotseland.—The first mention of these instruments in Africa which I can trace is one by Emil Holub,[2] who, in describing the region of the valleys of the Chobe and Zambesi, writes: "Under the council hut I noticed one of the *morupas* or drums that, as I afterwards learnt, are to be found in most of the Marutse and Masupia villages. The skin of the drum is pierced, and a short stick inserted into the opening, with another stick fixed transversely at its end, the whole instrument being a cylinder of about a foot to a foot and a half long. Their sound, which cannot be compared to anything much better than the creaking of a new boot, is made by rubbing the stick with a piece of wet baobab bast twisted round the hand of the performer. They are rarely brought into use, except on occasions when the inhabitants are celebrating the return from a successful lion or leopard hunt with music." (Fig. 17.) In another work, *Eine Culturskizze des Marutse-Mambunda Reiches*,[3] he describes one of these "reibtrommeln" as having a wooden cylinder, somewhat narrowed at the lower end, 50 cm. long, 20 cm. in diameter and 3 cm. thick; and he mentions that the stick, which hangs down inside the cylinder like a bell-clapper, is kept in place by little cross-pieces immediately above and below the membrane (Fig. 18). It is clear that the stick is but loosely fixed in place, as he describes it as projecting above the membrane for about one-third of its length, and the cross-pieces are represented as some distance apart, and not, as he described, immediately above and below the membrane. He here describes the sound as a deep growling noise.

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[1] *The Native Races of the Pacific States of North America*, vol. i, 1875, p. 738.

[2] *Seven Years in South Africa*, vol. ii, p. 123.

[3] *Mitt. d. Geogr. Gesell. in Wien*, 1879, vol. xii, p. 158.

Another specimen collected by Dr. Holub from the Marutse-Mambunda country (Fig. 19) and now in the Vienna Museum, is described Dr. R. Wallaschek[1] under the native name of *wupu-wupu*, a name admirably descriptive of the sound of these instruments. The wooden cylinder is slightly "barrelled," and is decorated with carved network design; it is 56 cm. long, while the stick is 77 cm. long, projecting considerably beyond the cylinder; it is carried by a leathern sling.

While staying on the Zambesi River at the Victoria Falls in September, 1905, I was fortunate enough to procure at Livingstone (six miles above the Falls) a fine specimen of the Barotseland friction-drum. It had been obtained from the Mashukulumbwe tribe in the Kafue River district. It consists (Fig. 20) of a barrel-shaped body of very light, soft wood, 70 cm. long and 27 cm. wide, the lower end narrower than the upper end, which is covered with raw-hide fixed with pegs. There are two raised bands, slightly carved and having perforated flanges standing out radially. The friction-stick, which is 72·5 cm. long, fits loosely through a hole in the centre of the drum-head. It is kept in place by means of transverse pegs not of wood but of very tough hide (? hippopotamus hide) above and below the drum-head, and hangs down inside the barrel reaching the bottom, which is open, to enable the hand to be inserted for grasping the stick and rubbing it. The notes produced are deep, as the instrument is unusually large. I was unable to ascertain whether the Mashukulumbwe use it specially for ceremonial purposes, or whether it is for general use where rhythmic sound is required. I have since received another specimen, through the kindness of Mr. W. Hazell, Civil Commissioner in North Rhodesia, who procured it for the Pitt Rivers Museum. This (Fig. 21) is from the Ma-Totela tribe of Barotseland, a tribe of iron-workers. The body is a wooden cylinder ornamented with irregular lozenges roughly carved and blackened alternately; it is 55·3 cm. long by 14·5 wide. The stick is fixed in the way above described and is 56·8 cm. long. The drum is furnished with a carrying cord. The membrane is fixed with wooden pegs. *Namalua* is the local name given me by Mr. Hazell, who states that the instrument is used principally at funerals.

In the Museum of the British South African Company, 21, London Wall Buildings, London, E.C., there are three specimens from Barotseland. They are essentially similar to that shown in Fig. 21 as regards the membrane and friction-stick. The membrane in each is pegged to the cylinder and the stick is made from a hollow reed. In one (Fig. 22) the wooden cylinder is 63 cm. long and 14 cm. in diameter at the top. A kind of Maltese cross is carved upon the surface in relief. The second example (Fig. 23 in the text) measures 71 cm. by 16·5 cm., and is decorated with reticulated carving, and the surface is blackened. The stick is 53 cm. long. The third (Fig. 24 in the text) is smaller, 53 cm. by 15 cm. The stick is 43 cm. long. Raised, cross-hatched bands are carved near the upper and lower ends, and the surface of the whole is blackened, leaving a light band at the centre. In these examples the friction-stick is stopped immediately above and below the membrane, and it does not rub against the edges of the hole, or the amount of play in the hole is reduced to, at most, a quarter to a half-inch. All three specimens closely resemble the Ma-Totela example (Fig. 21), and it is possible that they may have belonged to that tribe.

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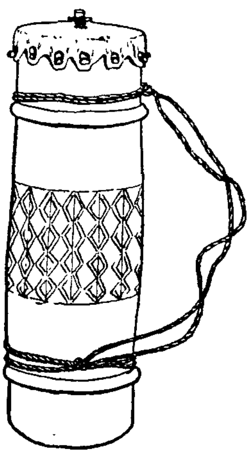
[1] *Mitt. d. Anthrop. Gesell. in Wien*, vol. xxviii, 1898, p. [2].



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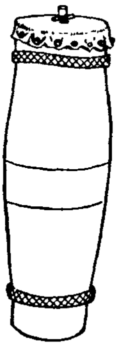

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Angola.—Monteiro[1] describes a similar instrument in Angola. "Another very noisy instrument with which the drums and marimbas are sometimes accompanied at the batucos, is made by covering one end of a small powder barrel or hollow wooden cylinder, open at both ends, with a piece of sheepskin tied tightly round it. A short piece of round wood, about 6 or 7 inches long, is pushed through a hole in the middle of the sheepskin cover, a knob at the end preventing it from slipping quite in. The hand of the performer is then wetted and inserted into the cylinder and the piece of wood is lightly grasped and pulled, allowing it to slip a little, the result being a most hideous booming sound."

Congo State.—In November, 1905, Mons. Emil Torday wrote to me saying that he had discovered a variety of friction-drum amongst the Ba-Yaka, who inhabit a region between the Inzia River and the Kwango River in the Kasai district. He has since forwarded to the British Museum a specimen (Fig. 25) which differs only in detail from the Barotseland examples. The drum is of wood, nearly cylindrical but slightly constricted at the centre; it is 34·8 cm. long and 17·5 cm. in diameter at the top. Raised handles are carved out of the solid at the sides and incised bands of cross-hatched triangles serve as decoration. The drum-head of raw-hide is fixed with minute pegs and with a rough binding. The friction-stick is much longer than the drum and has stopping pegs some 18–20 cm. apart, and the hole through which it passes is considerably larger than the diameter of the stick, with the result that the latter can pass freely up and down through the hole for a space of 7 or 8 inches. The player takes some wet leaves or grass in his hand, and, grasping the stick inside the cylinder, rubs it up and down, gripping it more tightly on the downward movement than on the upward. The sounds, which are often used to accompany songs, must, it seems to me, in this as in Holub's examples, be caused in two different ways. On the one hand, the vibrations of the stick caused by the rubbing is communicated to the drum-head when the stops on the stick press against it, and the membrane itself is thereby set vibrating and emits a sound. On the other hand, that portion of the stick which lies between the stopping pegs, being able to pass up and down through the hole, must create vibrations by rubbing against the *edges* of the skin, and so produce a different kind of sound. This no doubt is the case with all friction-drums in which the sticks are similarly loosely stopped.

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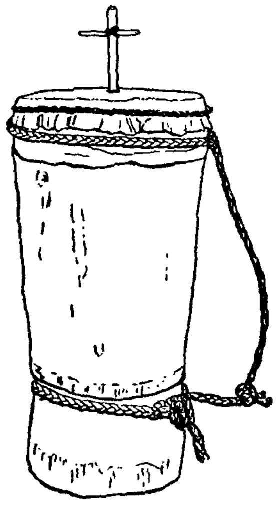
[1] *Angola and the River Congo*, vol. ii, p. 140.

In this respect these forms differ markedly from the European examples, in which the stick is firmly attached to the membrane, but they bear out the description of the Venezuelan *furuco* which I have described above.

I am indebted to Mr. Torday for a friction-drum from the Ba-Kwese tribe of the Upper Kwilu R., on the left bank about 19° E., 5° 40′ S. Kasai Region (Fig. 26). In this, the wooden drum-body is roughly cut out and is wider above than below. It measures 45 cm. in length and is 23·3 cm. wide across the drum-head. The friction stick is of cane 52·5 cm. long, fitted with the usual cross-stops, about 6 cm. apart, so that the stick can pass up and down through the hole in the membrane to that extent. The drum-head membrane is pegged with minute wooden pegs and is braced round with a band of plaited climbing-plant stems. The surface of the drum is reddened with ochreous earth.



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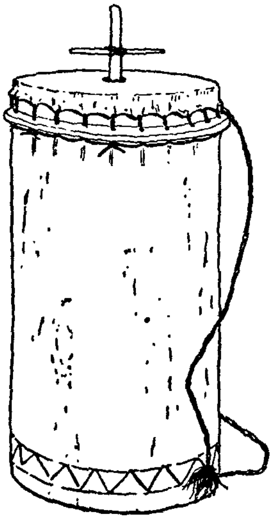

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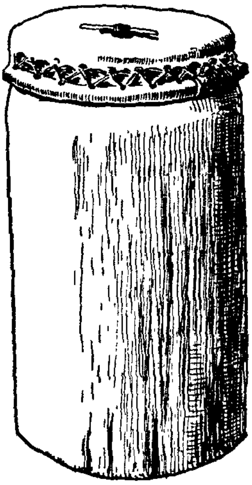

28.

Another example collected by Mr. Torday from the southern Ba-Mbala tribe, living immediately north of the Ba-Kwese, and now in the British Museum, is a very well-made specimen (Fig. 27). The body is of soft wood and cylindrical, 49 cm. long by 24·5 cm. wide. Near the upper end is a raised flange, encircling the drum, and carved from the solid. This flange is perforated at intervals of 25–30 mm., and the raw hide membrane is braced by means of a continuous lacing of fine cane strips; it is further secured by small wooden pegs driven in here and there. The circular hole in the centre of the membrane is very neatly furnished with an "overcast" stitching of fine split cane, to protect it from wear. The friction-stick is of palm-rib, 54 cm. long. The transverse stops are about 6·7 cm. apart. A carrying cord of brown vegetable fibre is fixed through holes at either end of the cylinder, and is not bound round the drum as in most African examples. The native name is *puita*. I am indebted to Mr. T. A. Joyce for a full description of this instrument. The name *puita* is given to me by Dr. Leo Frobenius as that employed also by the Ba-Huangana of the Upper Kwilu, a tributary of the Kwango, about 5° S. 19° E. A sketch of a specimen from this district has been kindly sent me by Dr. Frobenius and is reproduced in Fig. 28. It is almost identical with the last described specimen from the Southern Ba-Mbala, but is larger, 80 cm. high and 45 cm. in diameter and the bracing thongs run in a zigzag lacing. The friction-stick is about 60 cm. long, and the stops are about 5 cm. apart. The instrument was used for rhythmic accompaniment to the dance-songs. When in use the drum was held under the left arm with the open end directed obliquely upward. The stick was rubbed with the moistened hand. Mr. Torday informs me that both the Ba-Tetela and Ba-Kuba use this instrument, which is found widely dispersed in the Kasai region in the neighbourhood of the sixth parallel.

During his journey in the Kasai and Sankurru regions, Dr. Frobenius did not again meet with the friction-drum until he reached the upper waters of the Lubilasch River, about 7° S., where he found an interesting variety of the instrument among the Ba-Luba of that district. I have not as yet been able to receive a detailed sketch and description of this type, but, from the description and rough sketch sent me by Dr. Frobenius, it appears that the body of the drum, which is 54 cm. high, is of a globular form, having a narrowed cylindrical base upon which it can stand. The globular surface is decorated with the figure of a lizard in relief (resembling in this respect a drum from the Kasai region figured by Dr. Schmeltz in his *Album of the Ethnography of the Congo Basin*) (pl. 190). The Baluba call this instrument *tambue*, *i.e.*, "lion," because the sound emitted has some resemblance to the roaring of a lion. Only great chiefs have it in their orchestras.

These are the only regions in Africa from which I have as yet references to the friction-drum with rubbing-*stick*, although Dr. Wallaschek[1] remarks that the instrument occurs from the centre of Africa up towards the north as far as Morocco.

In other regions of Africa, however, just as in Europe, there are varieties in which the *stick* is replaced by a *cord* or *flexible band*.

Wanika.—C. New[2] describes the *muanza* of the Wanika of East Africa as "a kind of drum about 6 feet long. A portion of a trunk of a tree about this length is hollowed out to within an inch of one end. Over the open end is stretched the skin of a goat or sheep, through the centre of which a thong is passed, being kept in place by a knot on the inner side. The instrument is rudely carved and painted. The natives operate upon it by taking a wisp of cocoa nut fibre in each hand, seizing the thong, pulling at it, hand over hand, and allowing it to slip by rapid jerks through their grasp. The vibrations thus produced create some of the most hideous sounds imaginable." This instrument is practically identical in principle with the European friction-string variety, though it is on a very large scale and the drum is closed at the base.

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[1] *Loc. cit.*

[2] *Life, Wanderings and Labours in Eastern Africa*, 1874, p. 112.

Western Soudan.—An allied West African form (Fig. 29) is described by Dr. Ankermann[1] as having come from Mangu (0° Greenwich, 10° 40′ N "It is an ordinary short, cylindrical drum, covered at both ends with hide, which is stretched with bracing cords; it is of a form commonly found in the Soudan, whence the specimen . . . . comes. The two drum-skins are perforated at the centre and through the hole are drawn two long, narrow strips of leaf. These are knotted inside the drum to prevent their slipping right through. There is a large, square sound-hole in the side of the drum. The performer moistens his fingers and strokes the leaf-strips with them, a fairly loud noise being thus produced." I do not gather clearly from this description whether the leaf strips pass from one drum-head to the other, so that both the latter vibrate together, or whether each membrane has a separate pair of leaf strips and is set vibrating separately, but Herr H. Klose[2] in describing the same specimen, which is in the Berlin Museum, seems to indicate that the two membranes are connected by the strips, and in this case both would vibrate when the strips were drawn through the fingers. In any case the two membranes distinguish this West African instrument from its East African (Wanika) ally which has one drum-head only.

Ashanti.—Freeman tells us[3] of a drum which, in Ashanti, is played by drawing the end of a crooked stick across the drum-head, the sound resembling that of a bass viol. There is here some analogy with the friction-drums proper, though presumably the sound is in reality produced by a series of rapidly intermittent movements of the end of the stick upon the skin, caused by the friction upon the surface. A similar effect is often produced by tambourine players by rubbing the tips of the fingers across the tense membrane with a pushing movement.

T. E. Bowdich[4] mentions Ashanti drums "with heads of leopard skin (looking like vellum) only sounded by two fingers, which are scraped along, as the middle finger is on the tambourine, but producing a much louder noise."

Egypt.—In Mr. E. Lovett's possession is a specimen (Fig. 30), obtained in Egypt in 1902, of very rude construction. The small drum is of baked clay, apparently, covered over with paper, which also forms the drum-head. A bunch of horsehairs, knotted through the centre of the drum-head, are at the other end looped round a whirling stick made from the mid-rib of a palm-leaf. This form bears a strong family resemblance to the South Indian type mentioned below, and it is quite likely that it was introduced into Egypt as one of the very numerous Indian articles which have found their way into North-East Africa through the trade connection.

INDIA.—Although the distribution of friction-drums in Asia appears to be very limited, their occurrence there at all is a matter of much importance as bearing, as I shall show later, upon the question of the origin of the European forms, and also as extending very greatly the area of the geographical distribution of the group.

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[1] "Die Afrikanischen Musikinstrumente," *Ethnologisches Notizblatt*, Berlin, 1901, vol. iii, pt. 1, p. 61.

[2] *Globus*, vol. lxxxix, 1906, p. 70.

[3] *Travels in Ashanti and Jamar*, 1898, p. 98.

[4] *Mission from Cape Coast Castle to Ashantee*, 1873, p. 280.

I have already (p. 67) referred to the instrument described and figured by Mersenne in 1636, which he mentions under "Indian and Chinese Instruments," and I have expressed my doubts as to whether this was in reality an Eastern form. Be this as it may, a form of friction-drum is well known in Southern India. Dr. Edgar Thurston, Director of the Government Museum, Madras, gives a description[1] of "a toy called the frog (*tavalaikā* or *mēnghi*), consisting of a cup-shaped or conical clay tambour, the mouth of which is closed by stout paper, connected by means of a horsehair string with a stick, over which rosin has been smeared. When the tambour is whirled round, the horsehair, as it winds itself round the stick, produces a sound which is an excellent imitation of the frog-croaking on a monsoon night. The toy is hawked about the streets by Muhammadan boys on all occasions of festivals. The first specimen which I ever saw was in the possession of Dr. A. C. Haddon at Cambridge, and the paper covering the tambour bore a printed advertisement of Dindigul cheroots." Dr. Thurston kindly sent me a specimen (Fig. 31) from Madras. The body consists of a very small earthenware bowl, roughly made, and the paper covering has been put on when wet and pasted round the sides, tautening as it dried. The horsehair and stick are exactly as in the French example given above (Fig. 7). The local popular name, signifying "the frog," is admirably descriptive of the sound produced by whirling the instrument, which reproduces the *βρεκκεκεκὲξ κοὰξ κοὰξ* of Aristophanes to a nicety. The latter portion of Dr. Thurston's remarks refers to a specimen obtained by Dr. Haddon in Bedford, whither it had been sent from India as an advertisement. This example Dr. Haddon has kindly given to me (Fig. 32). The drum differs slightly in shape from Dr. Thurston's example. I have no reference to the occurrence of friction-drums in Northern India, though they are said to be more widely dispersed. Dr. Haddon gives the names *girgira* and *dugdugi* for the example which he sent me (Fig. 32).

Japan.—I am indebted also to Dr. Haddon for a small specimen of Japanese make (Fig. 33). It consists of a small, paper-covered cylinder of bamboo, parchment-covered at one end, with short fibre-string and twirling-stick. I do not know of any old references to their use in Japan, and it is possible that the instruments have been but recently introduced there. The specimen figured was procured in Leipsig.

I have now described the varieties under which the friction-drum is found and their geographical distribution, as far as I have been able to ascertain these hitherto. There remains for consideration the important question as to the probable origin or origins of this peculiar instrument, and the relationship of the types in the various regions to one another.

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[1] *Report on the Administration of the Government Museum*, Madras, 1904–5, p. 4.

ORIGIN.

In considering the factors which may have led to the development of this instrument, we must admit that direct evidence is wanting. Nothing that I can think of amongst *European* appliances seems to offer a clue to the solution of this question, as likely to have led up to this method of sound-production by the normal process of successive modification, nor is there anything which appears likely to have suggested the instrument outright. As far as Europe is concerned one might, in the absence of evidence of a gradual evolution, be tempted to believe that this simple, though excruciating, toy, was the spontaneous product of some inventive mind. I, for one, however, have little faith in theories of spontaneous invention, and prefer to seek any other possible solutions rather than fall back upon one which would involve a departure from the normal process by which the various products of human ingenuity have been arrived at.

In seeking for the origin of any class of human appliances it is well to turn to those regions in which we may find them existing as indigenous appliances among peoples in a *primitive* condition of culture, for it is among them that we are liable to find survivals from early stages in the developmental history. This environmental condition certainly obtains most markedly in connection with the examples which I have described from the African region. With the exception, perhaps, of the type recorded from the Western Soudan, in all cases the cultural environment of the African friction-drum is a very low one. The question arises—is there anything *here* which may suggest a possible origin for the instrument? I venture to urge that there is, and that a fairly plausible suggestion offers itself, one which is less far-fetched than might appear at first sight. There is one peculiarly African appliance which is found amongst many of the native tribes, and which enjoys a wide range of distribution east and west from the equatorial region to the southern portion of the continent. I refer to the well-known and characteristic type of native blacksmith's bellows, to that form which appears to be restricted to Africa. The structure of these bellows is very suggestive (Figs. 34 and 35). The essential elements (which are almost invariably paired) are (1) a hollow air-chamber of wood from which a duct leads to the fire. The upper circular rim of each air-chamber is (2) covered with a piece of skin after the fashion of a drum-head, though not strained tightly; (3) to the centre of this "drum-head" is attached the lower end of a stick, the upper end of which is free. With the exception of the duct through which the blast of air is directed, *the above are also the essential features of the friction-drums in which a stick is used instead of a string.* Now, as regards the manner of using the bellows (Fig. 34). The sticks (of the paired bellows) are grasped in the hands and are alternately pushed downwards towards the air-chambers and withdrawn. By this means, the covering membranes are alternately depressed and raised, causing air to be forced out and sucked in. It seems more than probable that, in the effort to produce the requisite downward pressure for creating a strong air-blast, the hands, moist with perspiration, would now and then slip along the stick, creating by the friction vibrations which would certainly be communicated to the membrane, causing the latter to emit a sound. The notes produced would vary with the pressure. In the bellows the membrane is not permanently taut like a drum-head, but it becomes strained under pressure by the resistance of the cushion of air in the air-chamber, and thus the tension, which is designedly put upon the membrane of a friction-drum, is automatically supplied in the case of the bellows, and converts the membrane into a vibratile body. What is more likely than that the unintentional production of sound with the bellows may have suggested the prototype of the African friction-drums with the result of a new type of noise-instrument coming into being. The frictional method of sounding may have been applied to drums of a form already in use. It is at least very suggestive that there is a striking correspondence in the distribution of these two appliances, which are frequently found in use side by side, and the essential features of whose structure are so nearly identical. This type of bellows has a very wide range, extending from the Zambesi and Ovamboland on the south to Liberia and the White Nile on the north, say from about 20° S. to nearly 10° N., and ranging widely east and west. In Barotseland the friction-drum and this form of bellows occur side by side, as amongst the Ma-Totela,[1] who are skilful ironworkers (Fig. 35). In Angola both again occur.[2] In the Kasai district of the Congo State both are found. *Geographically,* therefore, the friction-drums are intimately connected with the stick-and membrane-bellows, and this fact supports the theory of their *morphological* relationship. It would appear from its very wide distribution over Africa that this form of blacksmith's bellows is an ancient one, and the same argument may apply to the African friction-drum with friction-stick. It seems more than probable that the latter was known in Africa long prior to our earliest record of the instrument in Europe.

One point of difference between these friction-drums and bellows in Africa will be noted. In the former the friction-stick hangs down inside the body of the drum, whereas in the bellows the stick stands up from the membrane. It is obviously essential to the bellows that it should be so situated. With the noise-instrument, on the other hand, this is no longer necessary, and it is a matter of convenience in the case of the large and unwieldy African friction-drums to reduce their length by hanging the stick inside. The Mashukulumbwe specimen, for instance (Fig. 20), measures over all 70 cm. in height, and, were the friction-stick to stand out from the upper surface of the drum-head, the height would be almost exactly doubled, rendering the instrument most unwieldy and liable to damage. So too the Ma-Totela example (Fig. 21) is reduced in this manner from over 110 cm. to 56 cm. This difference in the position of the stick is, therefore, one purely of convenience and is dictated by the different uses of the two appliances.

Other instances of musical instruments having been derived directly from objects of everyday use will readily occur to one. Witness the musical-bow which was a direct derivative from the shooting-bow, of which the musical potentialities were suggested by the musical notes emitted by the tense bow-string. From this origin a long line of descendants has arisen, leading by slight successive improvements to some highly specialised forms of modern stringed instruments.[1] The *Nagel-geige*, or nail violin, was evolved from a mere nail in a wall upon which a violin bow used to hang. The clear note emitted by the nail when accidentally rubbed by the horsehair of the bow, in hanging the latter up, attracted the attention of Johann Wilde, the German musician, and about the year 1740 he constructed the first nail violin consisting of several accurately tuned iron pins which were thrown into vibration by means of a fiddle-bow. Although this instrument did not commend itself as a very practical one, it, none the less, by successive improvements was further perfected, became furnished with sympathetic strings and even attained in the hands of Träger of Bernburg in 1791,[2] to the dignity of a key-board instrument, under the name *nagel-clavier.* Its humble origin was completely obscured in its later developments, but remains a matter of history. Other parallel instances might no doubt be mentioned to bear out the theory of origin which I have suggested for the friction-drums, but this receives very strong support from the apparent absence of suggestive evidence of any other origin. If I am right in my surmise as to the manner in which the African friction-drums with hand-rubbed sticks were originated, those forms in which a cord or strip of palm-leaf is substituted for the stick may be a secondary development, the flexible cord or ribbon having supplanted the rigid rod. At the same time it appears to me possible that, in Africa, the type with friction cord may have had a history of its own, independent from though parallel with that of the stick forms, and be traceable to an origin almost identical, curiously enough, with that of the latter group. A glance at the sketch (Figs. 36 and 37) from ancient Egyptian wall paintings at Thebes (*temp.* Thothmes III., *c.* 1450 B.C.) will make my meaning clear. The bellows represented in this scene are closely similar to the Savage African form which I have described, and consist of a pair of air-chambers having ducts which convey the blasts to the fire, the ends of the ducts being protected from being scorched by means of fire-resisting nozzles probably of clay. The wide opening at the top of each bowl-like air-chamber is covered with a loose skin which is bound round the rim. To the centre of each membrane is attached one end of a long cord, and herein lies the only essential difference between the Ancient Egyptian and modern primitive African bellows described above. In the place of the rigid stick there is a flexible cord. The manner of working the Egyptian bellows is well shown in the illustration (Fig. 36). A man stands with one foot on each of the membrane-covered air-boxes, and, by throwing his weight first on to one foot and then on to the other, depresses the membranes alternately. As the weight is taken off the one membrane and transferred to the other, the cord attached to the former is pulled upwards, thus raising the membrane and refilling the chamber with air. As in the case of the stick-bellows, should the hand slip a little on the cord as the latter was strained, vibrations would be communicated to the membrane and a note would be emitted, the sound being reinforced by the hollow, resonant cavity of the air-chamber. The cord friction-drum may well have been suggested by this accidental production of sound, and, if this be so, one may plausibly urge that *both* types of African friction-drums originated in an identical manner, from two distinct though essentially similar types of bellows. I do not know whether the bellows worked with cords have extended in Africa beyond the Egyptian boundaries, but it is interesting to note that the two African types of friction-drums having flexible cord or bands, which I have above referred to, are both relatively *northern* types, the one from the Wanika near the East Coast to the north of Zanzibar, the other from the Western Soudan. Both localities are within the limits of influence from North-East African culture even in comparatively early days.

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[1] Bertrand, *Au Pays des Ba-Rotsi,* p. 93 (Ma-totela bellows).

[2] Rev. F. W. Read, *Journ. African Soc.,* Oct., 1902, p. 46 (bellows in Ondulu country).

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[1] H. Balfour, *The Natural History of the Musical Bow*, Oxford, 1899.

[2] C. Engel, *Cat. Musical Instr. in South Kensington Museum*, 1874, pp. 268, 343.

Turning now to India, the other principal region in which this instrument is found associated with a relatively primitive culture, the form (Fig. 31) as seen at the present day in Southern India, is practically identical with some of the Western European forms, so much so, indeed, that it is difficult to doubt that they have a common origin. This might easily be accounted for the assumption that the instrument was introduced as a toy into India by Europeans. Mr. Thurston, however, maintains that this instrument is indigenous in Southern India and was not a foreign introduction, and the opinion of so eminent a local expert is important. It is by no means impossible that the Indian form is morphologically related to the African types, but of this there is no proof, and one can only estimate the possibility of such relationship in the light of the large number of other striking parallel occurrences amongst the arts and appliances of these two regions, so numerous as practically to preclude the theory of independent origin for the greater number. Admitting this possible affinity with the African forms, as to whose origins I have advanced a theory, it is none the less desirable to consider the alternative possibility of independent origin in India, and to examine such evidence as there may be for assuming a strictly local development of the instrument in this region. What evidence there is is supplied, as far as I can see, by other Indian musical instruments, in which we may trace analogies, if not homologies, with the friction-drums which are sounded by rubbed strings. The essential features of the latter, as typified by the *tavalaikā* of Madras, are a drum with tense membrane to the centre of which a string (or bunch of horsehairs) is attached, through the medium of which vibrations are communicated to the membrane. Several other instruments are found in various parts of India in which these essential features occur, some well-known, others but rarely seen. They differ from the friction-drums chiefly in the manner in which the vibrations are caused, the tautened strings being plucked with the fingers or with a plectrum, instead of being caused to vibrate by friction, the character of the sounds emitted differing accordingly. The group of stringed instruments to which I refer are characterised by the possession of a single string which is attached to the *centre* of a tense drum-head-like membrane, thus differing from other stringed instruments in which the strings are attached to rigid supports.

The *Yektar* or *tuntuni* (Figs. 38 and 39) used by religious mendicants in the Deccan and the Central Provinces, as also by village reciters,[1] consists usually of a wooden cylinder open at both ends. Over the lower end is strained a piece of parchment after the fashion of a drum-head. A stiff bamboo is fastened to one side of the cylinder, projecting considerably above it, and at the upper end of the bamboo is a tuning-peg. A single string of wire is knotted through the centre of the membrane and is tautened to the required pitch with the tuning-peg. The string is plucked, and it follows that the membrane must take up the vibrations. The *gopî yantra,* which is also used by the Bairagis and Bâuls, or religious mendicants, for accompanying their songs, is an allied instrument of very similar construction (Figs. 40 and 41), but differs in the bamboo being solid at the top only, where it supports the tuning-peg. Below this it is cut into two long, narrow and flexible rods which spread apart and are fastened to opposite sides of the cylinder. The string is attached as in the Yektar. The springy limbs of the divided bamboo admit of the player varying the notes emitted when the string is plucked with the finger tips, for he can lower the tone by squeezing the two limbs together and raise it by relaxing them.[2] In the example shown in Fig. 41 the wooden cylinder is replaced by a gourd.

A very peculiar instrument, seemingly related to the above two forms, is the Pulluvan " pot-drum," *pulluva kudam*, used at the *Pámbantullel* (" snake-jumping ") ceremony in Malabar. Dr. Edgar Thurston, who very kindly sent to the Pitt Rivers Museum the specimen shown in Fig. 42, refers to this instrument in the Annual Report of the Madras Government Museum, 1902–3, p. 4, and also figures it in use in a recently published work.[3] That this instrument is so little known is probably due to its being used for ceremonial purposes by the Pulluvans, who employ its music in the ceremony of driving away snakes described by Mr. Thurston. It consists (Fig. 42) of a large, globular earthenware pot, 45 cm. high, having a circular hole 10 cm. in diameter knocked through its base. The pot is enveloped in a sheet of raw hide, strained tightly to the sides by means of thong braces to a band round the neck. Where the hide covers over the hole in the bottom of the pot it becomes a kind of drum-head, affording a pulsatile surface. Through the centre of this is knotted a twisted hide thong, which forms the string of this monochord, and which is about 64 cm. long, the other end being knotted through a hole in a small half coconut shell. When prepared for use, the coconut shell rests upon the ground and is pressed down by the end of a long wooden rod having a notch through which the string passes. A collar or loop attached to the neck end of the pot fits over the other end of the rod. The performer sits with his left leg over the rod, which is also held down with the left foot. The pot rests upon the left thigh, which is thus interposed between the pot and the rod. The tension of the string is regulated by the degree to which the pot is in this manner "bolstered" up with the thigh, since the distal ends of the string and the pot are attached to the rod. The left arm of the player rests on the pot and the hand holds a little wooden bar about 12 cm. long (Fig. 42 A), which is pressed upon the string at different points to vary the notes by lengthening or shortening the vibrating portion of the string. In the right hand a stout plectrum of wood, resembling a small stone celt in form, is held and the string is plucked with it. (Fig. 42 B.)

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[1] C. R. Day, *The Music and Musical Instruments of South India and the Deccan*, 1891, p. 130.

[2] V. C. Mahillon, *Cat. descriptif du Musée Instrumental du Conservatoire Royal de Musique de Bruxelles*, 1893, p. 140.

[3] *Ethnographic Notes in Southern India*, Madras, 1906, Plates XVI and XVII.

The foregoing Indian instruments, the *yektar* or *tuntuni*, the *gopî yantra* and the *pulluva kudam*, are characterised by the string being attached to the centre of a vibratile membrane covering an aperture in a resonator, and, although the method employed in causing the string to vibrate is by plucking it, it seems certain—and experiment bears me out—that the accidental drawing of the hand along the string would create vibrations which would be taken up by the membrane, and that sounds would be emitted in the same manner as in a friction-drum, and it appears very possible that the latter instrument may have been accidentally suggested by such an involuntary process. In any case, it must be admitted that these three types of instruments bear a striking structural analogy with the friction-drums, while their geographical association renders an actual phylogenetic relationship the more probable. This relationship is rendered even more evident in the structure of the *ananda-lahari*, a variety of the *tuntuni* used by medicant minstrels in North-Central India. This instrument (Fig. 43) consists of a large wooden cylinder, one end of which is closed by a membrane, just as in the *tuntuni*. A single string of gut is fastened through the centre of the membrane to a small toggle, and passing through the cylinder is attached at its other end to the centre of a similar membrane which covers a small lacquered wooden pot. In playing, the larger cylinder is held under the left arm, the little drum-like pot being held above it in the left hand. The tension upon the string can be varied by straining it more or less hard with the hand. A plectrum, held in the right hand, is used in twanging the string (Fig. 44).[1] Either end of this instrument has the essential structure of a friction-drum, as the string, together with either one of the resonators, might well act as such. The smaller skin-covered pot with the string (Fig. 45) bears, indeed, a faithful resemblance to some of the European toy friction-drums, and differs from the Madras form, to which I have alluded, only in the possession of a twirling stick by the latter. It seems, on the whole, probable that the Southern Indian friction-drum is a derivative from some stringed instrument belonging to the group from which I have given examples, and that, if this be so, it is not truly related to the African forms. Further investigations may lead to the linking together of the types from these two regions, but the evidence at present available points to their being traceable to distinct origins.

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[1] V. C. Mahillon, *Cat. Descript. du Musée Instrumental du Conservatoire Royal de Bruxelles*, 1893, p. 139.

In regard to Europe, we have the view urged by Dr. J. D. E. Schmeltz[1] that the *waldteufel* of Germany and its kindred in other parts of Europe were once instruments of considerable ceremonial importance, and that originally there was deep significance in the now childish toy (*"tiefer Sinn im Kind'schen Spiel"*). He urges that there is a relationship (*verwandtschaft*) between the *Waldteufel* and the *Schwirrholz* (*i.e.*, the friction-drum and the bull-roarer). As evidence of this he offers the German popular name *Waldteufel*, as connecting the instrument with the evil spirits of the forests, which could be scared away by the noise produced by it, as in the case of the bull-roarer, and he calls attention to the fact, common to both the *Waldteufel* and the bull-roarer, that they are whirled round in the air in order to produce their awesome sound. Unfortunately, Dr. Schmeltz produces no evidence whatever to prove any considerable antiquity for the friction-drum in Europe or elsewhere, and, as I have already pointed out, it does not seem to have been generally known in Western Europe early in the seventeenth century, if we may judge from Mersenne, who, while mentioning and figuring the instrument, describes it as extra-European. The earliest representations of European friction-drums which I have so far come across all show the type *without the twirling stick*, and, although some of the late forms in Europe are, it is true, whirled round in the air, and in this one respect present an analogy with the bull-roarers, it does not appear, from evidence at present available, that this type is a *primitive* one. On the contrary, judging by the forms which are found in use among very primitive peoples in Africa, we may more safely conclude that the primitive types are those which are not whirled round, and which therefore present no analogy whatever with the bull-roarer. This point seems to me to militate strongly against Dr. Schmeltz's theory. There remains only the name, *waldteufel*, which of itself can hardly be offered as adequate proof of the relationship of this instrument with the *schwirrholz*. The varieties of friction-drums have been given a great number of local popular names: *zambomba* (Spain), *rommel pot* (Holland), *cri de la belle mère* (France), *locust* (America), *jackdaw* (England), "frog" (India), *wupu-wupu* (South Africa), etc., etc. These and most of the other names given to the instruments are purely onomatopæic. Is not the name *Waldteufel* merely another similar instance, a well-merited compliment to the voice of the instrument?

In no case does the use of the friction-drum appear to be associated with any very *deep* ceremonial significance. In Europe it appears chiefly at fairs and at other times of rejoicing, and, although in some districts its use appears to be restricted to certain religious festivals, these latter are associated with a joyful ebullition of feeling which manifests itself in the creation of noise, and to this the friction-drum lends itself readily. Hence, possibly, the association with ceremonials even with those of a religious character.

[1] *Das Schwirrholz*, v.a.

If, in the absence of valid evidence, we may reasonably doubt that there has existed any special *functional* relationship between the friction-drum and the bull-roarer, we may without hesitation assert that *structurally* there is no kinship whatever. The method by which the sounds are produced is absolutely different in the two groups of instruments, and has been arrived at by processes of development as widely separated as it is possible to conceive.

DISPERSAL.

There remains a word to be said in regard to the dispersal of the friction-drums from one or more centres of origin. Their presence in the New World is, I am disposed to think, due to introduction from two distinct sources. In the United States the *locust,* so called, was derived, with little doubt, from Western Europe. The later forms appear to have been imported from France. On the other hand, it seems probable that the Central American varieties were derived from Africa. The Venezuelan *furuco,* in which the stick is rubbed against the edges of a hole in the drum-head, corresponds with those African forms (Ba-Rotse, Ba-Yaka, etc.) in which the loose attachment of the stick allows of sounds being produced partly by this means, and differs in this respect from all other extra-African forms. The instrument used by the Guajiqueros of Honduras exhibits a markedly though not exclusively African characteristic, in the fact of the string hanging down through the cylinder, after the fashion of the stick in African forms of friction-drums. These types were, no doubt, introduced into Central America by Negro slaves, together with the *marimba, sansa,* musical-bow and other instruments which accompanied the enforced immigration of black labour into the New World. Here they have become natuialised and to some extent modified in their new home, even among peoples indigenous to the region, whose culture has been influenced by that of the incoming alien race.

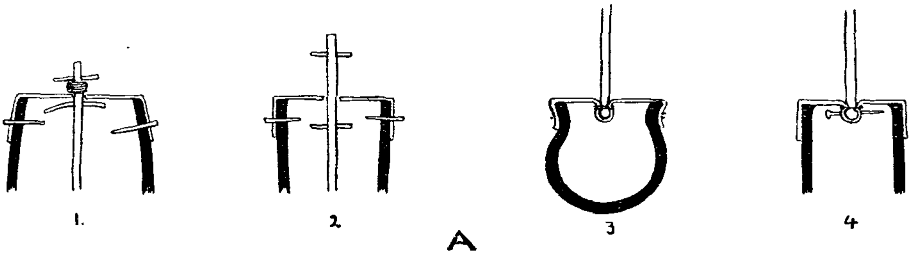
In Africa itself, I have already given my reasons for believing the instrument to be indigenous, and I have suggested a possible origin for them in that continent. As regards India, too, I have given evidence which points to a possibly independent origin in that region, although the bare possibility of a remote connection with the African forms should not be disregarded.

As to the European forms, there appears to be no evidence pointing to their having been invented locally. Unless we accept the example described by Mersenne as being really of Asiatic origin, we may be justified in assuming provisionally that the type with a friction-*stick* was introduced from Western Africa into Europe by the early Portuguese or Dutch voyagers who so persistently explored the coast-line from the fifteenth century onwards. The type with friction-*string* may, possibly, also have been suggested by African forms, though here India has a definite claim to be regarded as having produced the parent form of this type in Europe. At any rate, if we agree with Mr. Thurston in regarding the Southern Indian *tavalaikā* as being truly indigenous, we may reasonably assume that the type which is revolved upon a friction-stick was introduced into Europe from India, either from the French possessions or from the British, probably at a relatively late period. Thus it would seem likely, after weighing the probabilities suggested by the rather slender evidence, that of the three main European forms, the type with rubbing-stick may be of African origin, that with simple string may possibly be also an African derivative but is rather more likely to have come from India, while the type with whirling-stick was in all probability derived from India. If, however, the first type was an Oriental form, in accordance with the so-far unsubstantiated statement of Mersenne, then we must admit the likelihood of all three European types having reached Europe from India, or at any rate the East, and, in this case, the claim of Africa, one of the prominent original homes of the friction-drum, would be weakened.

Fresh evidence as to the geographical distribution, antiquity and varieties of friction-drums will no doubt be forthcoming, and, in the light of new information, it may be necessary to modify the views which I have tentatively expressed. One of my objects in writing this paper is to elicit further evidence, and to induce travellers to look out for examples especially in Africa and the East, in order that a fuller knowledge of this curious group of instruments may be acquired and that the question of its migrations may definitely be settled. That it is frequently overlooked may be attributed partly to its simple toy-like nature, partly to the fact of its being to some extent reserved for use on special rather than ordinary everyday occasions. The assignment and restriction of many forms of primitive musical instruments to ceremonial or quasi-ceremonial use, while tending to preserve the types long after they have ceased to be employed in a general way, causes them at the same time to be overlooked by travellers who may not have been privileged to attend the ceremonies or festivals at which they are used, and a study of native religions and other ceremonial observances will frequently bring to light some interesting rudimentary type, which may prove of much value in tracing the early history and phylogeny of some group of instruments. In the case of the friction-drums the ceremonial use does not appear to be usually of a very serious character, nor to imply a specially religious significance, but, taken as a whole, the employment of these instruments seems to be to a great extent restricted to particular occasions—popular and religious festivals, processions, fairs, etc.—when they serve as a means of swelling the noise which acts as a safety-valve to pent-up spirits, and which is likely to remain an essential feature of such festive gatherings. At any rate, this limitation to special occasions renders the appearance of these instruments somewhat sporadic, and at other times they are in many instances but rarely seen in use.

While thanking heartily all those who have so kindly given me their help already, I should feel most grateful to any who would send me notes and especially specimens with full data as to locality, use, native names and so forth. By means of such assistance one may hope to arrive at satisfactory conclusions as to the ethnological position of this group of instruments.

As a help to those interested in further investigations, I append a brief summary of the main varieties in tabular form, together with diagrammatic sectional figures.



A. WITH FRICTION-STICK.

a. The stick passing through a hole in the membrane.

(1) The stick passing downwards through the hole in the drum-head, and stopped with transverse pegs immediately above and below the membrane, so as practically to prevent play against the edges of the orifice. The sound produced by vibrations communicated to the membrane along the stick. [Diagram A. 1.]

Africa. [Figs. 20, 21, 22, 23, 24.]

(2) The stick as in (*a* 1) but stopped with pegs fixed some distance apart, allowing the stick to pass backwards and forwards through the hole in the membrane for a limited distance. Sounds produced both as in (*a* 1) and by friction of the stick upon the edge of the orifice. [Diagram A. 2.]

Africa. [Figs. 17, 18, 19, 25, 27, 28.]

(3) The stick not stopped with transverse pegs, but able to pass freely up and down through the hole in the membrane. Sound produced only by friction of the stick against the edges of the orifice.

Venezuela.

β. The stick attached to the membrane, but not passing through it.

(4) The stick standing up from the drum-head to which it is fixed by its end being pressed against the centre of the moistened membrane, so as to form a pit, as it were. It is secured in its place by binding round the enfolding portion of the membrane [Diagram A. 3], or by a pin passed transversely through stick and membrane, or by both methods. [Diagram A. 4.]

Europe. [Figs. 1, 2, 3, 4, 9, 10, 11, 12.]

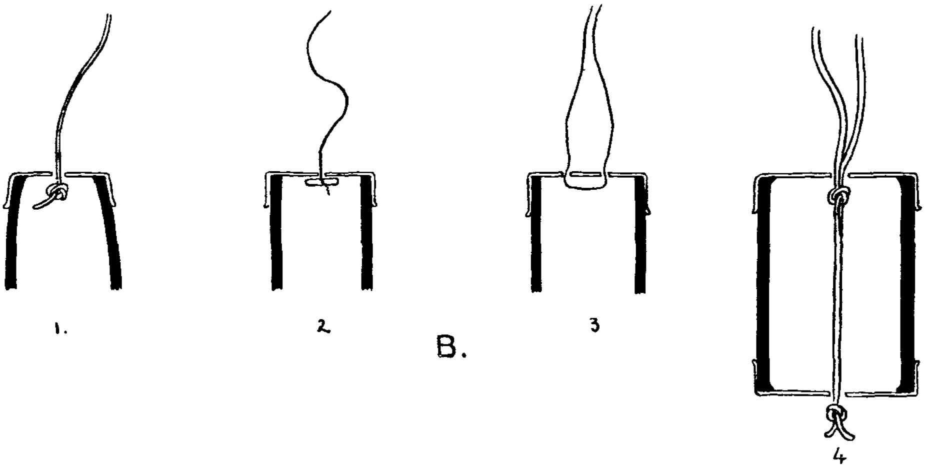
a. Without twirling-stick. Sound produced by drawing the fingers along the cord.

(1) The cord formed of palm-leaf strips, horsehairs or fibre, simply knotted through hole in centre of the membrane [Diagram B. 1], or secured by means of a toggle [Diagram B. 2].

Africa, Europe, Great Britain [Figs. 13, 14].

(2) The cord passing downwards from the centre of the membrane (or its substitute) through the body of the drum.

Honduras, England. [Figs. 15, 16.]



B. WITH FRICTION-CORD.

(3) The drum furnished with a membrane at each end of the cylinder. The cord passes though *both* membranes and is stopped by means of knots. [Diagram B. 4.]

Western Soudan. [Fig. 29.]

β. With twirling-stick. Sound produced by the friction of the cord upon the stick, when the instrument is whirled round upon the latter.

(1) The cord, usually of horsehair, knotted through the membrane or fixed with a toggle [Diagrams B. 1, B. 2], the other end being looped round the neck of a twirling-stick.

Europe, British Islands, United States, India, Egypt. [Figs. 5, 7, 30, 31, 32, 33.]

(2) Similar to *β*. 1, but with the cord threaded through *two* small holes in the membrane [Diagram B. 3].

Europe, United States. [Figs. 6, 8.]

Description of the Figures.

Fig. 1.—Friction-drum, *romme le pot*, said to be Oriental, but probably Dutch. Copied from F. M. Mersenne, *Ordinis Minim. Harmonicorum Libri*, 1636, book ii, p. 111.

Fig. 2.—Boy playing upon the *rommel pot*, Holland. Copied from P. M. Hough, *Dutch Life in Town and Country*, 1901, p. 96.

Fig. 3.—Dutch performer on the *rommel pot*. From painting by Jan H. Steen, in the Hermitage Gallery, St. Petersburg. (No. 901.)

Fig. 4.—Ditto. From painting by the same artist in the Royal Gallery at Cassel. (No. 296.)

Fig. 5.—Whirling friction-drum, the body made from a bottle-neck, Northern France. Showing the manner of whirling the instrument round. Author's collection.

Fig. 6.—Whirling friction-drum, *waldteufel*, with double cord, Leipzig, Germany. Cylinder 9 cm. × 7 cm., of pasteboard; stick 21 cm. Dr. Haddon's collection.

Fig. 7.—Whirling friction-drum, Ambleteuse, Pas de Calais, France, 1896. Cylinder of paste board, 8 cm. × 5·7 cm.; stick 15·7 cm. Collected by F. York Powell. Pitt Rivers Museum, Oxford.

Fig. 8.—Whirling friction-drum, *arran*, Gascony and Guyenne, France. Cylinder of bamboo or reed, c. 10 cm. long, double horsehair. Trocadero Museum, Paris.

Fig. 9.—Italian peasant performing upon friction-drum. Copied from F. Bonanni, *Gabinetto Armonico*, 1722, pl. 83.

Fig. 10.—Performer upon the *caccarella*, Naples. From *Piedigrotta*, Naples, Sept. 8, 1891.

Fig. 11.—Friction-drum, *caccarella*, Naples, 1896. Body consisting of an earthenware pot, 13·5 cm. × 15·3 cm.; stick of reed, 54 cm. Collected by R. T. Günther. Pitt Rivers Museum, Oxford.

Fig. 12.—Friction-drum, *zambomba*, Madrid, Spain. Cylinder of tin, 12 cm. × 8 cm.; stick 26 cm. Copied from T. de Aranzadi in *Globus*, vol. 88, 1905, p. 30.

Fig. 13.—Friction-drum, *chicharra*, Madrid, Spain. Cylinder 8·5 cm. × 5·5 cm. Same source as fig. 12.

Fig. 14.—English friction-drum, Oxford, 1889. Pasteboard cylinder, 6 cm. × 5·5 cm. Author's collection.

Fig. 15.—Watering-can rose converted into a friction-drum, Sawtry, Huntingdonshire. Horniman Museum.

Fig. 16.—Friction-drum made from an old horn beer-mug, Abbotsby, Huntingdonshire. Horniman Museum.

Fig. 17.—Friction-drum, *morupa*, Barotseland, with section drawing. Copied from Emil Holub, *Seven Years in South Africa*, vol. ii.

Fig. 18.—Ditto. Copied from Emil Holub in *Mitt. d. Geograf. Gesell. in Wien*, 1879, vol. xii, p. 158.

Fig. 19.—Friction-drum, *wupu-wupu*, Barotseland. Collected by Emil Holub. Wooden cylinder 56 cm. long; stick 77 cm. Vienna Ethnographical Museum. Copied from Wallaschek in *Mitt. d. Anthrop. Gesell. in Wien*, 1898, vol. xxviii, p. [2].

Fig. 20.—Friction-drum, Mashukulumbwe, Kafué R., Barotseland. Collected by the author at Livingstone, Zambesi River, 1905. Wooden body, 70 cm. × 27 cm.; stick 72·5 cm.

Fig. 21.—Friction-drum, *namalua*, Ma-Totela, Barotseland. Collected by W. Hazell, 1905. Wooden cylinder, 55·3 cm. × 14·5 cm.; stick 56·8 cm. Pitt Rivers Museum, Oxford.

Fig. 22.—Friction-drum, Barotseland. Wooden cylinder, 63 cm. × 14 cm. British South African Company's Museum, London Wall.

Fig. 23.—[In the text]. Ditto, Barotseland. Wooden cylinder, 71 cm. × 16·5 cm.; stick 53 cm. Same museum.

Fig. 24.—[In the text]. Ditto, Barotseland. Wooden cylinder, 53 cm. × 15 cm.; stick 43 cm. Same museum.

Fig. 25.—Friction-drum, Ba-Yaka, Kwango region, Congo State, c. 9° S., 20° E. Collected by Emil Torday. Wooden cylinder, 34·8 cm. × 17·5 cm. British Museum.

Fig. 26.—[In the text]. Friction-drum, Ba-Kwese, Kwilu R., Kasai region, Congo State. Collected by Emil Torday. Wooden cylinder, 45 cm. × 23·3 cm.; stick 52·5 cm. Pitt Rivers Museum, Oxford.

Fig. 27.—[In the text]. Friction-drum, *puita*, Southern Ba-Mbala, Kasai Congo State. Collected by Emil Torday. Wooden cylinder, 49 cm. × 24·5 cm.; stick 54 cm. British Museum.

Fig. 28.—[In the text]. Friction-drum, *puita*, Ba-Huangana, Upper Kwilu River, Congo State, c. 5° S., 19° E. Collected by Dr. Frobenius. Wooden cylinder, 80 cm. × 45 cm.; stick 70 cm. From a sketch by Dr. Frobenius' travelling artist.

Fig. 29.—Friction-drum, with double membrane and palm-leaf strips, Mangu, West Soudan. Berlin Museum. Copied from Ankermann, "Die Afrikanischen Musikinstrumente," *Ethnologisches Notizblatt*, Berlin, 1901, vol. iii, pt. 1, p. 61.

Fig. 30.—Whirling friction-drum, Egypt. Body of clay, 4·5 cm. × 3·5 cm.; stick 18 cm. Given to the Author by Mr. E. Lovett.

Fig. 31.—Ditto, *tavalaikā* or *menghi*, Madras, India. Collected by E. Thurston. Pottery body, 5 cm. × 3 cm. ; stick 13 cm. Pitt Rivers Museum, Oxford.

Fig. 32.—Ditto, *girgira* or *dugdugi*, India (obtained as an advertisement in Bedford, 1903). Pottery body, 6 cm. × 2·5 cm. ; stick 14 cm. Given to the author by Dr. Haddon.

Fig. 33.—Ditto, of Japanese manufacture, obtained by Dr. Haddon in Leipzig, 1903. Bamboo cylinder, 4·5 cm. × 3 cm. ; stick 19·5 cm. Given to the author by Dr. Haddon.

Fig. 34.—Bari blacksmith's bellows, White Nile. After Richard Buchta in F. Ratzel's *Völkerkunde*, 1895, vol. ii, p. 65.

Fig. 35.—Ma-Totela blacksmith's bellows, Barotseland. Copied from A. Bertrand, *Au Pays des Barotsi*, 1898, p. 93.

Fig. 36.—Ancient Egyptian fire-bellows, from a wall-painting at Thebes, temp. Thothmes III., c. 1450 B.C. Copied from F. Cailliaud, *Recherches sur les Arts et Metiers . . . . de l'Egypte . . . .*, 1831, pl. 6A, fig. 2.

Fig. 37.—Ditto. Same source, pl. 6B, fig. 1.

Fig. 38.—Monochord, *yektar* or *tuntuni*, Deccan and Central Provinces, India. Copied from C. R. Day, *Music and Musical Instr. of Southern India*, 1891, pl. vii.

Fig. 39.—Ditto, India. Total length, 68 cm. ; wooden cylindrical body, 20·4 cm. × 12·6 cm. Pitt Rivers Museum, Oxford.

Fig. 40.—Monochord, *gopî-yantra*, Aborigines of Chota Nagpur, India. Total length, 70 cm. ; wooden cylindrical body, 21 cm. × 15·7 cm. Pitt Rivers Museum, Oxford.

Fig. 41.—Ditto, Calcutta. Total length, 73 cm. ; body of gourd. Tagore collection, Indian Institute Museum, Oxford.

Fig. 42.—Monochord, *pulluva kudam*, Pulluvan, Malabar, Southern India. Collected by E. Thurston. Body consisting of a large earthenware pot, 45·5 cm. × 43·7 cm. ; wooden bar, 93 cm. ; string, 63·5 cm. ; *a* = movable wooden fret, 12·3 cm. ; *b* = plectrum of wood, 8·4 cm. long. Pitt Rivers Museum, Oxford.

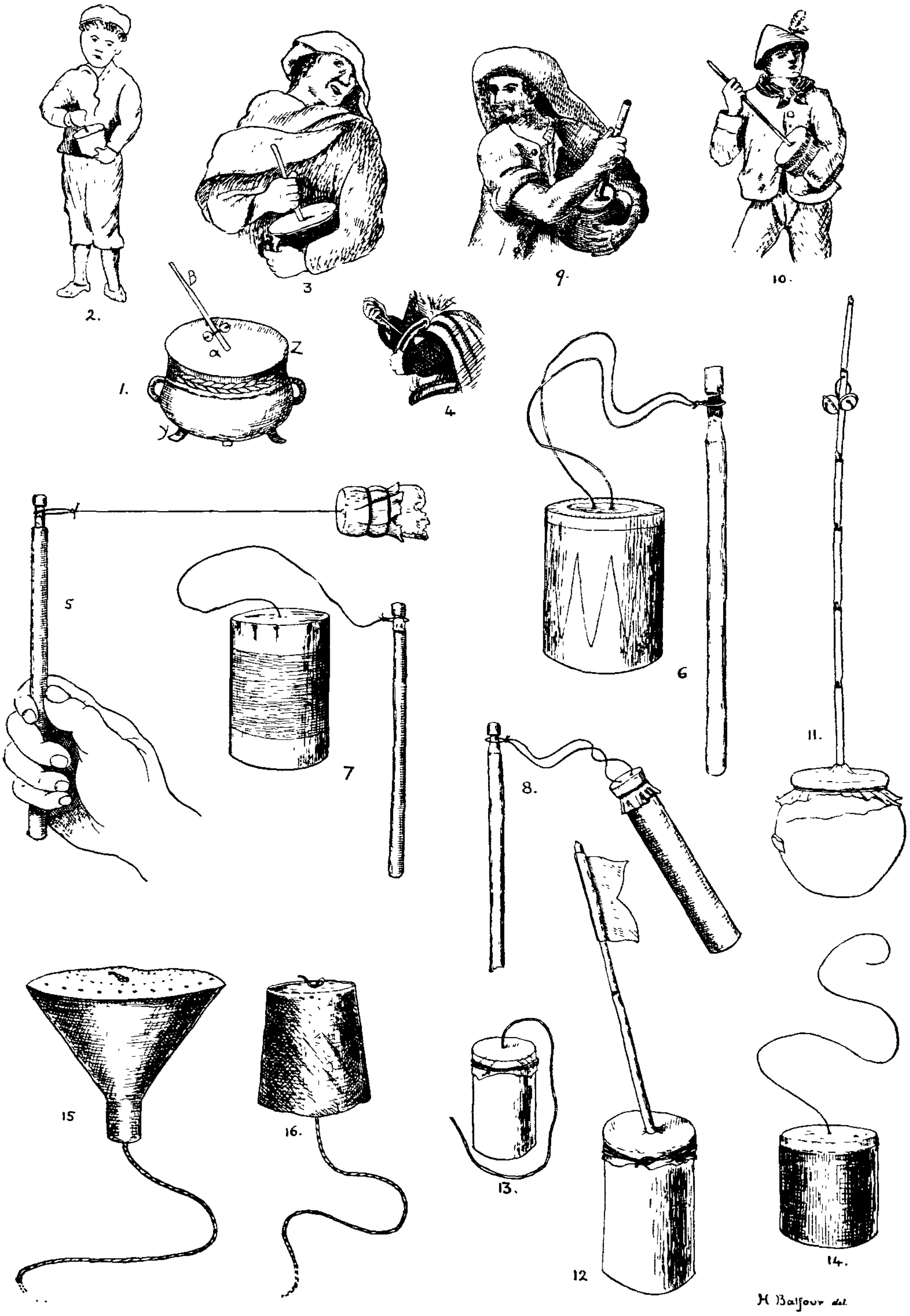
Fig. 43.—Monochord, *ananda lahari*, India. Wooden cylinder, c. 38 cm. long. Tagore collection, Indian Museum, South Kensington.

Fig. 44.—Method of playing upon the *ananda lahari*, India. Copied from V. C. Mahillon, *Cat. Descript. du Musée Instrumental du Conservatoire Royal de Bruxelles*, 1893, p. 139.

Fig. 45.—The smaller drum of an *ananda lahari*, of turned and lacquered wood, 6 cm. long. Tagore collection, Indian Institute Museum, Oxford.

Diagrams A and B [in the text]. Sectional sketches illustrating diagrammatically the chief varieties of the friction-drum.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, Plate XII.



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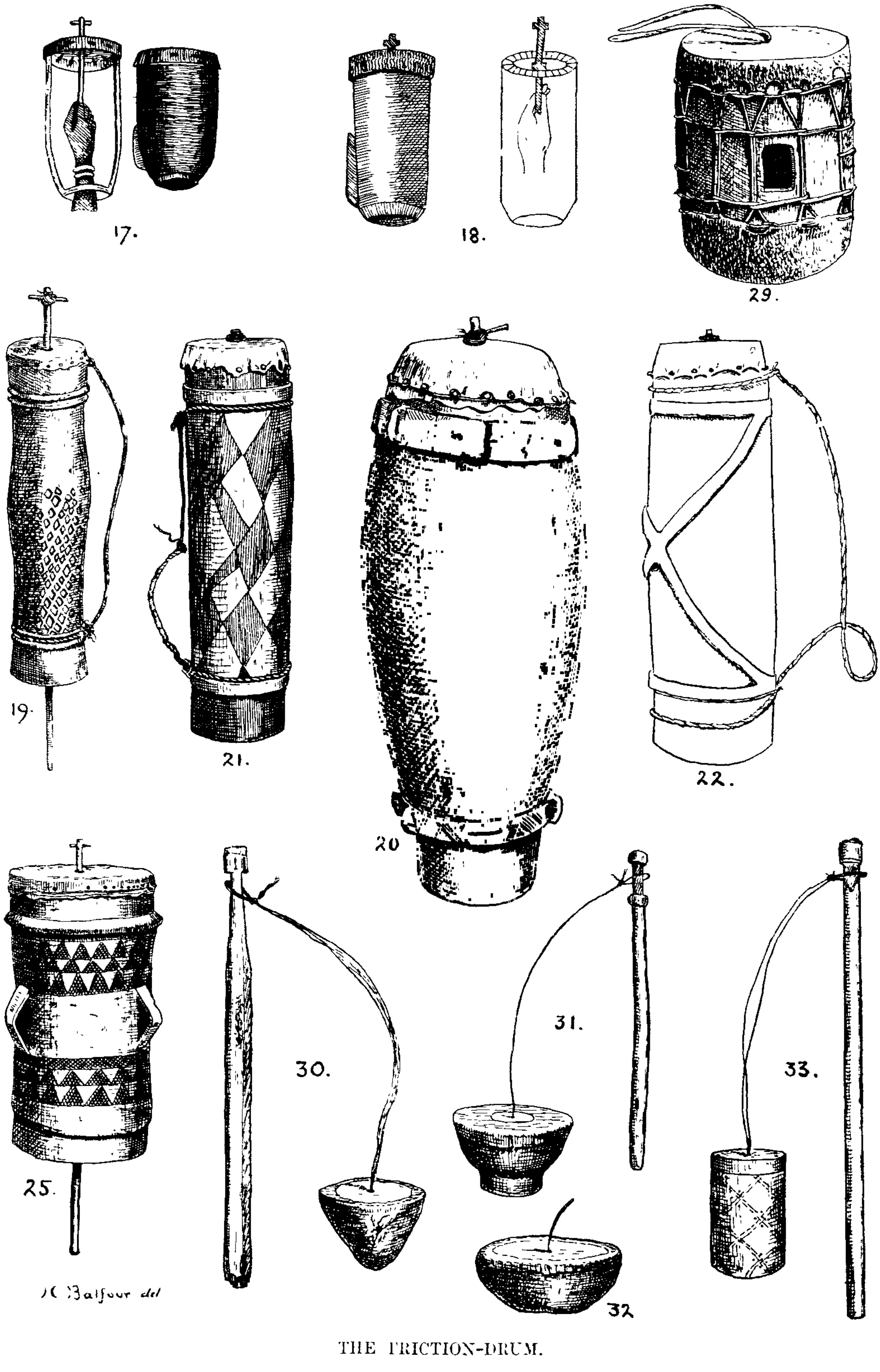
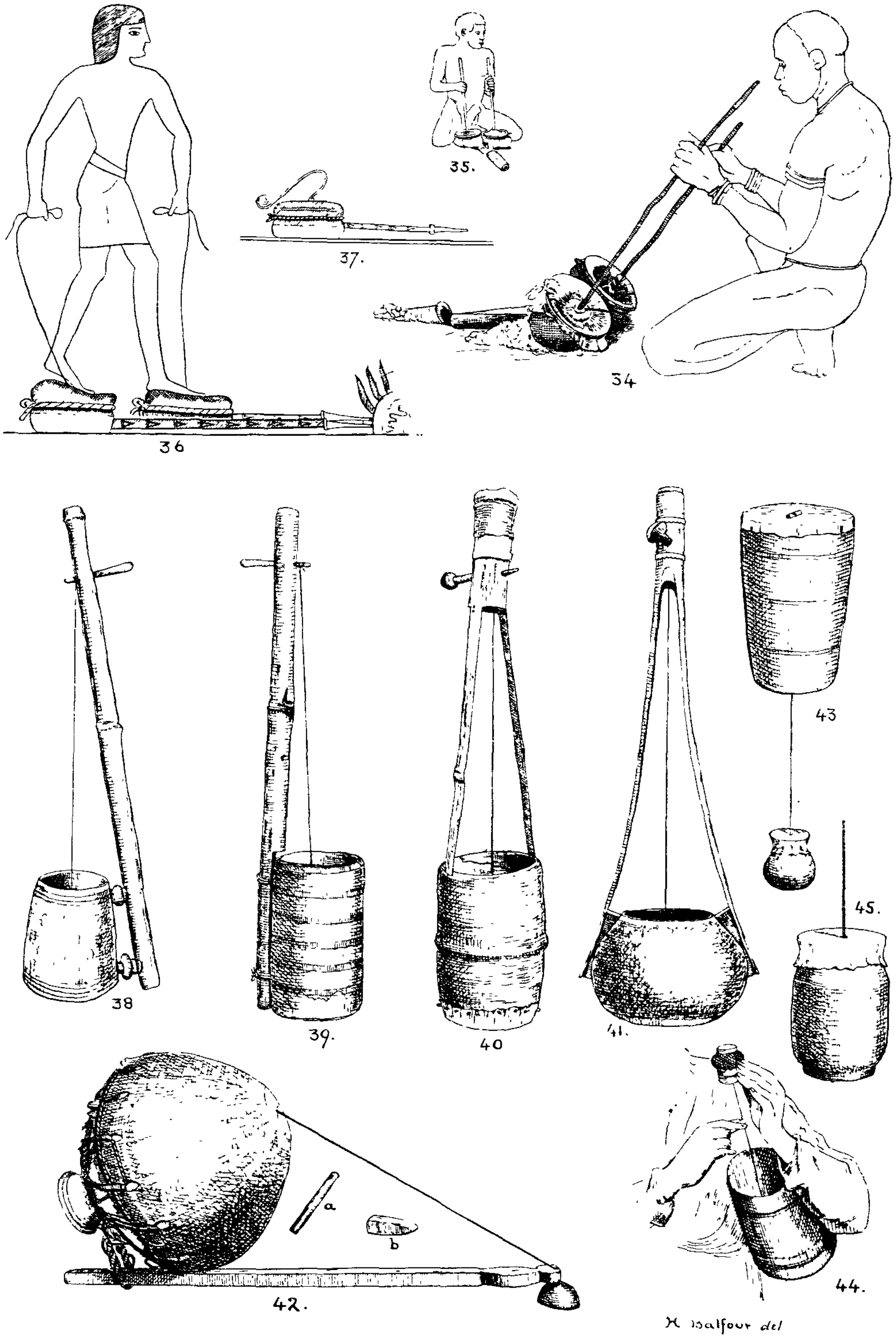
THE FRICTION-DRUM.



THE FRICTION-DRUM.



H. Balfour *del*

THE FRICTION-DRUM.

THE BAHIMA: A COW TRIBE OF ENKOLE IN THE UGANDA PROTECTORATE.

[WITH PLATES XV AND XVI.]

BY THE REV. J. ROSCOE, Local Correspondent of the Anthropological Institute.

THREE reasons led me to undertake the journey to Enkole from Mengo in Uganda, where I had resided for many years.

Firstly, from my own herdsmen, who are related to these Banyankole, I heard some interesting accounts of their customs, and by constant contact for years with them I had acquired a smattering of their language which enabled me to gather that it was an interesting field for ethnological research.

Secondly, the native Prime Minister of Enkole had paid us a short visit in Uganda, and we had become friendly, and he invited me to visit his home.

Thirdly, I heard the people were destroying all their old fetiches and temples, and were rapidly adopting western ideas when they became Christian, so I was anxious to see the country before everything belonging to the old regime had passed away. Accordingly, in July, 1904, I obtained leave for a month to make the visit; unfortunately, this only gave me a week in the country, and only four days of real work. The Prime Minister Mbaguta gave me all the sympathy and help he could, and secured a couple of excellent men well versed in the old traditions and customs to give me information. I was glad to find I could understand most of what was told me without the aid of my own cowman as interpreter; then, too, I soon secured the full confidence of my informants, and was able to make good progress with the work during my short visit. When I was returning to Uganda the Prime Minister gave me a guide to take me to the sacred forest where the lions and leopards are said to be, but through a misunderstanding I cycled some miles past the road which branches off to the forest, and did not discover the mistake until late in the day when the guide caught me up; it was then too late to retrace my steps and the visit to the forest had to be abandoned. So far as I am able to judge the information here given is correct, and the men who assisted me were not likely to wilfully mislead me. It is, however, desirable that the information should be supplemented, and, if necessary, corrected by fuller details than I was able to obtain during my short visit.

I am indebted to F. Knowles, Esq., Sub-Commissioner of Enkole, for kindly taking some photographs for me on the spot; to the Rev. E. Millar for other photographs, and to the Rev. H. Clayton for kindly securing some amulets and other fetiches for me.

The Country.

The country of these interesting people is called Enkole, or according to the late Sir H. M. Stanley, Ankole; it is in area larger than Wales, being 75 miles long and 65 miles wide; it is bounded by Toro on the north, Karagwe on the south, Uganda on the east, and the Albert Lake and Congo Free State on the west. The days are cool for Tropical Africa, and the nights are decidedly cold, especially in the valleys, where a heavy mist hangs all night.

It is a very undulating country, though none of the hills run to any great height. The land does not appear to be nearly so rich or fertile as that of Uganda proper; a short coarse grass covers hills and valleys, and upon this the cattle thrive. There are few or no swamps, though there are three or four small rivers; the absence of papyrus in the rivers, and of elephant grass in any quantity (as in Uganda) is striking. The seasons of the year are more defined than in Uganda, few showers of rain fall during the dry season, and the grass dries up and becomes like hay; it is during this season the grass is fired and burned to its roots, which is the only form of cultivation it receives. Afterwards, the fresh green blades begin to shoot up, even in the dry weather, and the large herds of cattle are driven over these to the more abundant growth of the past year. The country is not well wooded though there are clumps of trees here and there; the timber seems to be of little value even for building native huts.

The People.

The Bahima or Banyankole, as they call themselves, are a tall, fine race, though physically not strong; many of them are over 6 feet, the young king is a giant of 6 feet 6 inches, and broad with it; few of them are under 5 feet 10 inches. The women are also above the average height of Englishwomen; their features are like those of Europeans, straight nose, finely-shaped heads, with lofty foreheads, thin lips, absolutely unlike the negro type, and their carriage is dignified. There is a difference between the women and the men; the former have a slight bend or stoop from the hips, this is artificial and is affected from an idea of its gracefulness—their back and shoulders are perfectly straight: the reason for walking with the bend may be accounted for by their extreme stoutness, and the lack of exercise. A Muhima beauty must be like a prize ox; too fat to walk, the women struggle along a few yards, and then stop to rest; the method of resting is to place a hand on either knee in a stooping posture for a few moments.

The men are scantily dressed; except for a bit of cow hide on the shoulders they are absolutely nude. The women are profusely dressed; they wear two large cow hides, one fastened round the waist, while the other covers the head and shoulders and extends to the feet.

The chief occupation of the men is herding cattle; they form warm attachments for the animals, some of them they love like children, pet and talk to them, coax them, and weep over their ailments; should a favourite die their grief is extreme, and cases are not unknown in which men have committed suicide on the loss of a favourite animal. As herdsmen they can manage a couple of hundred cows; their duty is to guard the herd from wild animals and against being carried off by hostile tribes; the cows so thoroughly understand the men that they come and go as they are told.

The herdsmen are armed with one or two spears, and with a long stick to drive the cattle (the men stand at various parts of the herd). They have a peculiar habit of standing on one leg with the other raised and the sole of the foot placed on the calf of the supporting leg, while they lean on their spear or cow staff; frequently, one man stands whilst the others squat about on their haunches. These men have no permanent houses, the herds move from place to place according to the state of the pasturage. At each place where they camp, huts are built and a kraal for the cattle; the huts are built at short distances from each other to form a circle, the doors all look inwards; between the huts trees with thorny branches are placed to keep in the cattle, and to prevent the entrance of wild animals. The kraal has only one entrance which is closed at night by drawing in a large thorny bush; no one can enter the kraal or go out from it by night. The herds go forth early each morning after the milking is done, and return in the evening at sunset; all day they wander about grazing, often making a circuit of twelve or fifteen miles. They are taken to water twice in the day, about noon, and again towards the evening before going into the kraal. A kraal is always built near good water, though in some places the water is inaccessible to the animals, and has to be drawn by the men; under such circumstances long clay troughs are made, and a couple of men are told off to draw water and fill the troughs, whilst others keep the animals in order so that they do not overcrowd; they also see that each animal has sufficient. At watering time grass fires are made to create smoke, which keeps the flies from tormenting the animals whilst they drink; men also stand about amongst them with leafy branches to whisk off the flies, and prevent them from settling and annoying the cows whilst they drink. As each batch is watered they make off to a little distance to await the rest of the herd; it is amusing to see how soon they learn to know the benefit they derive from the smoke, and the struggle with each other to obtain the places nearest the fire.

The cows have no artificial food, nor are they fed after entering the kraal; sometimes, if sick, a little salt may be added to the water for the animals to drink. The amount of milk each cow yields is very little, about five pints in the morning, and perhaps a little more at night; the calves are always reared by the mother, and never, except when a cow dies, is the calf reared artificially. The Bahima say a cow will not give her milk unless the calf is with her, on this account the calf is allowed to suck first before any attempt is made to milk. When a calf dies the skin is preserved and produced each time the cow has to be milked. The men know numerous herbs for doctoring their cattle, and administer some herb by injection into the uterus to make a cow yield milk when its calf has died; this has to be done with care, and not too often, or it causes the animal to become barren. No vessel is allowed to be used except their own wooden or earthen ones, the use of others would they believe be injurious to the cows and calves. Not only are other vessels prohibited, but their own must be fumigated with smoke from a particular grass to give the milk flavour and make it palatable to their taste. Both morning and evening a fire is made in the kraal around which the cows arrange themselves to be milked; these fires are fed with grass which has been used for the calves' bedding or with dried dung only; the ash heaps are left in the kraal undisturbed; dung is placed on the top to keep the fire alight during the day. Each morning when the herds have left the kraal some of the men who remain at home sweep up the enclosure; the refuse is placed to one side of the heap, whilst some of the dung is put to dry to be used for fuel for the central fire.

A large sheep is usually kept with each herd and goes to graze with it daily; it is said to be a protection against thunder. The calves do not go with the herds, they are allowed to run about and graze near the kraals, and are brought in during the heat of the day; in the evening, after being suckled, they go into the huts for the night.

The perplexing question is, Where did these people come from? According to one theory they come from a country to the east, possibly the Masai country. Others again, amongst them, believe they come from Egypt; some of their pots and musical instruments bear a strong resemblance to Egyptian pottery and instruments. There is no doubt they migrated in large numbers, with their cattle, into Ankole, overcame the aborigines, the Bahera, who are agriculturists, and made them their slaves, to cultivate millet and plantains for making beer. These slaves do all the menial work, such as building huts and zerebas for their kraals.

The Bahera girls are kept to carry water, and do the heavy work of the Bahima ladies. These Bahera (poverty-stricken ones, as the name applies) have adapted themselves to their masters by learning and adopting their language; their food is almost entirely vegetable, either plantains, millet, or sweet potato; their dress, the skins of goats or sheep tied round their loins; they keep sheep and goats, and fowls, whilst a few of the more wealthy have cows.

List of Kings.

It is impossible to secure a reliable list of Bahima kings, owing to the custom of abolishing the name from the language directly the king dies. Should the name be the name of an animal, they give the animal another name at once; for example, the king is often called a lion, and at his death the generic term has to be changed and a new name coined.

The following is a list of the kings obtained from an elderly person who was induced to impart the information; it is not, however, guaranteed to be trustworthy, all that can be said is that such men were kings at some time or other in the past:—

1. Luhinda.
2. Kasâsira.
3. Mirimai.
4. Lumongi.
5. Machwa.
6. Kahiya.
7. Wabisenge.
8. Gasiyonga.
9. Mutambuka.
10. Ntale.
11. Kahaya.

The reigning sovereign, before death, announces who is to succeed him, but, should the chiefs have any special reason for disregarding the late king's wishes, another person is elected from among the princes; the chief reason for setting aside the former king's selection is, dissolute life or evil temper; the choice of a successor is decided by his qualifications, and not by his seniority: when the chiefs differ about the selection, each party places its candidate at the head of a force, a battle ensues, and the war continues until one or other of the claimants is killed, when the conqueror takes the throne.

The princes are usually placed in various parts of the kingdom under some responsible chief; the chiefs are expected to train them in the art of cattle breeding, and also in the customs of the tribe. When a prince comes to the throne he invariably raises the chief, who brought him up, to be one of the first men in the kingdom; all the people call him the king's father. Neither the people or the king have any permanent houses; like the commonest Muhima the king lives amongst his cattle, the only distinctive feature being the size and better structure of his kraal. Inside the hut, opposite the door, is a dais of earth; one portion of this is taken up with the fetiches, which are laid out; in another part the milk pots are arranged ready for the evening use. On one side of the hut, which is divided into three compartments by skins hanging from the roof, or by barkcloths, are the sleeping apartments; the centre of the hut forms the hall where visitors are received, meals taken, and business transacted. In his hut the king has, on the right side of the door, a dais of earth upon which a lion skin and an antelope skin are spread; these form the royal seat, chairs and stools being unknown, and quite foreign to the Bahima; all the lower orders squat on their haunches. The freedom and familiarity with which the king is treated by all is striking; even the poorest child can walk up to him and talk to him freely; but with all this ease and freedom they have a deeply ingrained respect for their king and princes, and the king's word is law. All weighty and important matters are discussed openly, crowds of people gather together and the leading chiefs sit near the king and assist him by their advice; on such occasions a lion skin is spread for the king, he alone sits down, others present squat on their haunches. When any person from another country or tribe visits the king he has to leave his weapons at a distance before he can be presented. If any one uses abusive language to the king he is instantly put to death. Any Muhima who has been deprived of his cattle for an offence is never allowed in the king's presence, or doubtless he would kill him.

GOVERNMENT.

The king is recognised by the Bahima as the owner of all cattle; they form his principal wealth. The land is not regarded as of any value to him or his people except for grazing purposes; neither king nor people ever speak of the land as having any value, nor is it carefully delimitated as in Uganda. At the same time it is roughly divided up amongst nine Bakungu (leading chiefs), who have control over these districts for pastoral purposes. What the land is to the king of Uganda, the cattle are to the king of Ankole; the chieftainships are awarded according to the head of cattle possessed and not by the amount of land.

These chiefs settle all disputes, and troubles arising about cattle, and questions concerning the clans. The chiefs (Bakungu) are named:—

1. Nganzi (who is prime minister.)
2. Lugumayo.
3. Masiko.
4. Kalyebara.
5. Mbangira.
6. Kijoma.
7. Mazinyo.
8. Igumira.
9. Nsonga or Kamulasi.

The last two, 8 and 9, are princes; the districts over which they rule belong exclusively to the royal family. Each Mukungu is directly under the king and responsible to him for the conduct of the herdsmen and the cattle in his district. As stated above they care little for the land, still they adhere to natural boundaries for their districts and do not trespass into other districts for grazing purposes. Under the chief (Mukungu) are Bahima from every clan, and instead of having sub-chiefs to assist in the government of his district, he has representatives, or heads, from each clan. The headman, or father of the clan, is nominated by the clan he represents, and presented to the king for confirmation in the office; if approved he takes his duties under the Mukungu; should he be rejected the clan nominate another man in his place. The heads of clans try cases in their own clan, that is, between members of the same clan; other cases, of clan against clan, can only be settled by the Mukungu. Members of a clan may appeal from the decision of the head of their clan, if they are not satisfied with it; in such circumstances the case goes to the Mukungu, from him an appeal goes to the Nganzi, and finally to the king; in case the parties are not satisfied with the king's decision, there is the fire ordeal, which is final. There are court fees, which are paid into the first court before the case is heard . the fees are usually paid in hoes, or weapons, and in the more difficult cases in cattle; once the fees are paid there are no charges even if the case goes from court to court. In each district are settlements of slaves (Bahera), who are agriculturists; the chiefs (*Bakungu*) and various clans claim from them servants of both sexes to do their menial work, and men for building the more permanent kraals, and for carrying the baggage from place to place, when they move to new pasturage. The cattle of a *Mukungu* are numbered by the thousand, even a poor man may have a couple of hundred animals; the *Mukungu* has to see that all the cattle in his district are cared for, that their pasturage is good, herding thorough, and that sick animals are tended; he must prevent the various guardians from killing too many for his own use, or selling them. Any one selling cattle or killing too many is deprived of all, and condemned as being unsuited for the office of herdsman, and injurious to the king's interests. Each guardian of cattle may divide or subdivide his herds amongst his relations, or he may dispose of some if he wishes to purchase a wife, the cattle in this case being only transferred from one clan to another; he cannot, however, part with them to anyone of another nation : even cattle taken in war, directly they reach the country, belong to the king; though on the way a man may, with his leader's sanction, exchange a few for slaves, or may kill some for food. The head of the party is the king's representative and responsible for all the spoil. The office of *Mukungu* is hereditary ; should, however, one fall vacant by death at the time a new king begins his reign, he may disregard the custom, and bestow the chieftainship on some favourite, who may be of quite a different clan. The Prime Minister is elected by the king alone; each new king chooses his Prime Minister directly he is crowned, and should the office fall vacant during his reign he elects a new minister.

CLANS AND MUZIRA (TOTEMS).

The *Bahima* are divided up into fourteen clans, each having its own particular sacred object, *muzira* or totem. Some of the clans are subdivided, but retain the one common *muzira* (totem) in addition to the new one adopted by the section of the clan. I could obtain no satisfactory information as to the origin of the totem; the same feeble explanations given by the Baganda were offered, namely, that some of their ancestors partook of some portion of the animal and died from the effects, the descendants were then prohibited from eating that food, and it became the family totem. The members of a clan are all closely related, the same term is used in speaking of a brother or sister or cousin ; the clansmen must be cared for in sickness, helped in distress, righted when wronged, and avenged in death by the clan.

The names of the clans are :—

1. Abahinda, whose totem is *Nkima*, a monkey ; these are princes only.
2. Abasambo „ „ *Ngabe*, a cow.
3. Abagahiya „ „ *Ngobe*, a cow.
4. Abasingo „ „ *Kitale*, a cow with a black stripe from neck to tail.
5. Abasito „ „ *Kigabo*, a cow.
6. Abasaigi „ „ *Lulimi*, a cow's tongue.
7. Abami „ „ *Ente luuzimu*, a cow with black or white spots.
8. Abagai „ „ *Ngobe*, a cow with stripes upon it; they may not drink the milk from it or even touch it.
9. Abasingo „ „ A cow with markings running from head to tail.
10. Abasikatwa „ „ *Ente yalukungu*, a cow of a dark brown colour.
11. Abakimbiri „ „ A cow born feet first.
12. Abatalogo „ „ *Ebyenda*, entrails of cows.

13. Abatwa whose totem is *Abalongo* (twins). When a woman gives birth to twins they desert the kraal, place the mother and her twins with her parents, and build a new kraal; when the twins have cut their first teeth the husband restores his wife to her home, and has connection with her.

14. Abaitira „ „ *Mabere* (the human breast). When a woman gives birth to a female child they bring a piece of cow dung, put upon it a little human milk, and throw the dung into the kraal to be trodden upon by the cows.

No *Muhima* can enslave one of his own tribe: they are all free born and may not be held as slaves by one another, or sold into slavery. All their slaves are from other tribes whom they happen to capture or purchase.

The men always milk the cows, the women are never permitted to do so; should a cow be a restless one, or one that kicks, its hind legs are bound together by a leather thong, above the middle joints (hocks), it is released when the milking is over and the calf is allowed to go to finish its meal.

The women's duties are to wash the milk pots, perhaps it would be better to say see the pots are washed, because the work generally falls upon the slaves to perform. The pots in which the milk is kept are mostly of wood; they are washed out with boiling water, and left to dry; they are then fumigated with the smoke of sweet-smelling grass. Sometimes the vessels are said to need extra cleansing, and for this purpose the urine of cows is used; they are washed out thoroughly with this, and then with boiling water. When young men go away herding cattle and have no women with them to cleanse their pots, or draw water for them, they invariably use urine for cleansing their vessels and only smoke them afterwards For fumigating they have small pots some 6 inches in diameter with narrow necks and a flange at the bottom of the neck. In the side of the fumigating pot is a hole 2 inches in diameter, and into this hole dried grass is inserted and ignited, the smoke being forced up the neck by patting the hole or gently blowing into it; the empty milk pot is then inverted and placed over the fumigator, the neck of which is placed in the neck of the milk pot. Women also churn; their churns are large bottle gourds; into these the milk is poured, the neck corked, and a pad of grass or bark cloth put beneath the gourd, which they rock to and fro until the milk is churned. Butter is chiefly used for anointing themselves.

Food.

Milk is the chief diet of the Bahima. When milk is plentiful they drink it warm from the cow early in the morning, and what is over they drink at noon. They never allow the milk to stand after noon or to go sour; what they cannot drink they give to their servants. When cattle are few and milk is scarce, the men drink the morning milk, and the women the evening. The men are allowed to eat beef, the meat of certain antelopes, and buffalo; women are only allowed to eat beef, though when pressed by hunger they may eat plantains; vegetables are, however, tabu to both men and women under ordinary circumstances; the person who eats vegetables ought not to drink milk. Beer made from plantains may be drunk by the people without causing any harm to the animals; their common intoxicating drink is made from milk or honey. All the wealthier people have meat for the evening meal. The meat is cooked on a spit of wood over the fire: food is cooked in this way alone, and all foreign methods are avoided.

Death and Mourning.

When the king dies the body is laid out at once on a litter, the knees are brought up under the chin in the favourite sitting posture, the hands are crossed over the breast, and the body is placed on its left side. The body is kept a couple of days in the kraal, and washed over with milk two or three times each day; on the second day it is wrapped in a large cow skin and taken to Ensanzi, the burial place of the kings. Ensanzi is a forest which is inhabited by lions, which are said to be possessed by the spirits of former kings of Ankole; in the forest is a temple and attached to it are a number of priests whose duties are to feed and care for the lions, and to hold communications with the former kings when necessary. The skin used for wrapping the king's body must be the skin of a fat cow just killed by having its head twisted round by several strong men until the neck breaks; when the royal body arrives at Ensanzi it is removed from the skin by the priest, who washes it with milk: it then lies in state for several days until it swells, and the stomach bursts. During this time the priest is busy daily feeding and feasting the lions with cattle which have been brought as offerings to the departed kings. He also has to find a young cub to present to the people, because the swelling and collapse of the corpse represent pregnancy and birth of the lion king. Directly the collapse takes place a lion cub is produced, and the priest announces that the king has brought forth a lion. He presents the cub to the people, and proceeds to feed it with milk. For some days the people remain until the cub has gained strength and begins to eat meat; all the interest and anxiety now centre in the cub, the corpse receives an ordinary burial and is forgotten; the king lives in the cub. When the cub grows up it is released and allowed to wander in the forest with the other lions; it is thus by no means fully tame, still it is less fierce than the ordinary wild lions, and is accustomed to seek its food in a certain place from the hands of the priests. The priests, called *Kwgerira* (pleaders), live always in the temple in the forest; they receive constant offerings of cattle for the lions, and feed them daily. The lions in this forest are sacred, no one may kill them, they are said to be so tame that the priests can move amongst them without fear; in any other part of the country lions may be killed with impunity, only those in this forest belt being sacred.

The king's wives have their burying place in a belt of the same forest Nsanzi. The corpse of a queen is washed with milk and kept in the kraal a couple of days: it is then wrapped in a cow-hide, and taken to the forest where a priest receives it. An offering of cows is sent for the leopards, because the spirit is supposed to become a leopard. The priest of the leopard forest takes the body out of the hide and washes it daily with milk whilst it swells; this as in the case of the king's body, is said to be pregnancy, and when it collapses he presents a leopard cub which he says the queen has brought forth; the cub is tended and fed until old enough to be turned out with the other animals, when it runs loose with them. The priests of the leopard forest always live in the forest and daily feed the leopards with meat from offerings sent to the departed queens: the office is hereditary.

The spirits of dead princes and princesses enter snakes; another belt of the same forest, Nsanzi, is sacred to snakes; in it is a temple with priests who feed the snakes; and guard them. The bodies of princes or princesses are taken and treated like those above mentioned; the swelling of the body is said to be caused by pregnancy, and at the collapse a snake is produced which the prince or princess is said to have brought forth; it is fed with milk for a time until big enough to be turned out with the others in the forest. In neither the case of queens nor in that of princes or princesses are the funeral ceremonies so elaborate as in the king's obsequies, nor do the people seek their aid to the same extent that they seek that of the departed king.

The ghosts of the common people have no special abode, but wander about near the kraals; they have their little huts in which food, drink and clothing are placed. The burial place of a commoner is always the dung heap in the kraal; the widow and relations guard the grave for three or four months to keep wild animals from disturbing the body: the kraal is then left, and a new one built some distance away. The relatives mourn a couple of days, during which time the body is kept wrapped in a skin; during the mourning the heir is chosen. At the funeral he stands in the grave to receive and place the body in position, resting on its left side. A person dying childless is buried with the legs stretched out, not bent up in the sitting posture, and little attention is paid to his position in the grave. The ghosts of all commoners have first to go to Karagwe or some other distant land: they afterwards return and are able to do good or evil to the relatives; on this account huts, too often in ignorance called devil huts, are built, in which offerings to propitiate them are placed. When the mourning is ended, the widows and relations shave their heads, and resume their duties; should a relative from a distance arrive after the mourning is ended, the chief widow takes him to some spot a little distance from the kraal, and tells him all about the illness, death and burial of the deceased; they weep together and return; mourning is not renewed in the kraal once the rites are ended.

SICKNESS.

Sickness is accounted for in four ways:—

1. It is thought to be caused by the departed king, who has been offended in some way: the Mandwa (chief priest to the king) is the only person who can assist in such a case: paralysis is attributed to this source.
2. It is set down to witchcraft (*kuloga*), which is practised by a person with the desire to kill another secretly; the illness may take any form of disease.
3. Fever is attributed to natural causes.
4. Illness is attributed to ghosts (*mizimu*), which take possession of people for various causes, and have to be exorcised.

The Mandwa (chief priest) is held responsible for any case of paralysis. The remedy is to present offerings to the departed king, to discover in what the patient has offended and promise not to offend again.

Witchcraft usually takes the form of chest complaints and skin diseases; medicine men are employed to discover the person who has caused the disease; the accused person has to supply the remedies to cure the disease, and also give his reasons for causing the illness. In cases where the accused person denies the charge of bewitching, the case is tried by the chief of the district, and if necessary it goes before the king.

Fever is brought on by local or climatic conditions of the country, no person is held responsible for it; it is a freak of nature. When a person becomes delirious it is put down to possession by a malicious ghost, and the medicine man has to come and smoke out the ghost: this is done by burning various kinds of grass known to be distasteful to ghosts, and causing the patient to inhale the smoke. Offerings are also made to the ghosts in the little huts near.

A common complaint amongst these people is a deep-seated abscess; their cure for this is to transfer the disease to some other person by obtaining herbs from the medicine man, rubbing them over the place where the swelling is, and burying them in the road where people continually pass; the first person who steps over these buried herbs contracts the disease, and the original patient recovers.

INHERITANCE.

A man's eldest son usually inherits his father's cattle at the father's death. Should there be several children the younger brothers become assistants to their eldest brother. The father's brother takes the widows, unless he happens to have two wives already; under such circumstances the eldest son takes charge of them, though they are regarded as the property of the uncle, and he pays them marital visits from time to time; any children born to these widows are accounted the children of the deceased, not of the uncle. If a man dies childless all his cattle go to the king for redistribution; the king may give the deceased's brother, who inherits, some of the cattle, that is as he chooses. No woman can inherit property. Concubines and slaves become the property of the heir, the son may marry them if he wishes, even though they have had children by his father.

ADOPTION.

The Bahima practise adoption: the male relatives always take charge of a brother's children. When a man dies his brother takes any children of the deceased, and places them one by one in his wife's lap. Then he binds round her waist the thong used for tying the legs of restive cows during milking, just as is done after child birth. The children are then brought up with his own family.

MARRIAGE.

Both girls and boys are betrothed by their parents whilst they are quite young: the mother has the care of the girls and keeps strict watch over them so that they may grow up pure. Girls are therefore in constant attendance upon their mother; if she goes away from home to visit relations, the daughters go too. A girl prior to marriage may not cut her hair, nor may she wear any ornaments upon her waist or legs; beads and cowrie shells are worked into her long hair, and are a token she is still unmarried. When betrothed couples are old enough to marry, the youth takes a milch cow and a heifer to the girl's parents; this gift ratifies the engagement, though he is not allowed to see his future bride. The bride is kept closely veiled from the time the betrothal gift has been brought: no man, not even her brothers, may look upon her. When the date for the marriage has been arranged, the bridegroom gives ten cows as her dowry. The relatives of both parties then assemble at the parents' house for the ceremony. The bride's father supplies a fatted cow for the occasion; this animal is taken a short distance from the kraal and killed, fires are made, the flesh is distributed amongst the guests, who grill it over the fire, and all partake of it on the spot. After the meal they return to the house, the bridegroom enters, takes the bride by the right wrist, and leads her out of the house; she is still closely veiled in a finely dressed cow hide, so that nothing of her face or form is visible. Directly the bride is brought out her relations produce a strong rope, one end of which they tie to her leg, and the relatives of the bride and bridegroom take sides and have a tug of war for her, the bride's party struggling to retain her, while the opposite party try to drag her off. During this tug of war the bridegroom retains his hold of the bride's wrist and she stands weeping and sobbing at being carried off from her father's house. This contest always ends favourably to the bridegroom's party. The bridegroom hurries his bride along a few yards to a spot where a few of his friends stand ready, with a large cow hide spread on the ground; the bride is placed upon this, and the young men hoist her up, and rush off with her in triumph to the bridegroom's father's home. Meantime the bridegroom's parents have hurried back, and made ready for the reception. Directly the bearers arrive with the bride, the bridegroom places his bride in his mother's lap, and then in his father's; she is thus received with every token of affection as a daughter. After this she is taken to their bed, and lies on it for a time. This ends her inauguration as a member of the family. An aunt accompanies the bride and remains with her for a couple of days though she does not sleep in the same house with her; on the third day the marriage is consummated and the aunt returns home, taking a fine cow with her, a present from the bridegroom's father. The bride's father always gives his daughter a present of cattle when she marries; this must not be less than six good cows. Should a girl go wrong before marriage she is degraded and cast out by her clan; if she is with child she is sent out of the country until her child is born. A place called Karagwe on the west of Ankole is the place to which these unfortunates are banished. After the child is born the girl may return to the country, but no one of position will marry her, only a serf or some disgraced person who is unable to obtain another wife.

POLYANDRY.

Sometimes a man finds he is too poor to marry, his cows are insufficient to supply milk for the daily need of even one wife, or it may be he cannot afford the number of cows for the marriage dowry: in such a case he asks one or more of his brothers to join him, and together they raise the necessary number of animals; a woman will readily agree to this arrangement and become the wife of two or three brothers.[1] They have the right of sharing her couch turn and turn about until she becomes pregnant, when the elder brother alone has the right of access to her: the children born under such circumstances belong to the elder brother. Such an agreement, however, does not deter the younger brothers from obtaining wives themselves later when they can afford them. Women keep themselves veiled from all men, even from their fathers and brothers: the restrictions seem severe to a Western mind, and yet the morality is exceedingly lax. Once a woman is married all restrictions are ended, she may welcome to her bed any of her husband's friends or relations with impunity; the children resulting from such intercourse belong to the husband. When a friend visits a man he sleeps on the same bed with him and his wife; the rules of hospitality are such, the man must leave his wife to his friend in the early morning: when a man is away from home and a visitor arrives, the wife must entertain him, and if he desires it act as his wife. It is also customary to exchange wives; for instance, when a man and his wife visit a friend, they invariably exchange wives during the time of the visit.

No man may marry into his father's clan; all women of that clan are his near relations, and are called either mothers or sisters, etc. These restrictions do not apply to princes, they may marry their sisters, and have intercourse with their married sisters; only betrothed or unmarried princesses are forbidden them. The rules of exogamy do not apply to the mother's clan, though it is not usual for a boy to marry into that clan.

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[1] The only other Bantu people known to the writer to be polyandrists are the Baziba to the S. of Uganda.

The punishment for forcing a girl is either to pay the dowry and marry her, or the man must forfeit his cattle and thus become a common herdsman.

Divorce is seldom practised, though a man may put away his wife if she becomes a prostitute, or allows her husband's enemy to have sexual intercourse with her. In rare cases a man will divorce his wife if she becomes quarrelsome and abusive. Abuse from a wife is a serious matter, the husband accuses her to the head of the clan, who calls her to give account of her behaviour, and unless she can give an adequate excuse she is condemned to go to a lake near Karagwe for purification; a strong emetic, and a purgative, are administered: when these have done their work she is washed in the lake, and restored to her husband. Menstruation they call seeking a child. During the time of her periods a woman is isolated, she may not lie on her husband's bed, or in fact on any bed, she must lie on the floor; she is not allowed to drink milk lest she should injure the cows; she has to eat vegetables and drink beer.

BIRTH.

There are no special restrictions or tabus for a pregnant woman, she is allowed her ordinary milk diet, and follows her usual vocations until quite near the time of delivery: as the time draws near she undergoes a process of massage with butter to make her bones supple, and this is continued daily until the labour pains begin. A midwife is in attendance for several days before, and, directly she sees the labour has begun, she fastens a rope to a rafter for the mother to hold on to during the labour; the mother stands in a stooping posture, and a woman supports her holding her under the arms. The midwife stands behind and receives the child, places it on a bit of barkcloth or skin, and awaits the placenta; when this comes away the umbilical cord is cut with a strip of sharp wood split from the tube through which they drink their beer. The placenta is buried in the doorway: the hole into which it is put is lined with sweet-smelling grass. It is unlucky for the child to be born feet first, the child is sure to turn out a worthless unsatisfactory man. Directly the child is born the midwife places a large spike-like thorn in its mouth which is said to make its breath sweet; the face, head, eyes and nose are well rubbed by the midwife with her hands. If the child is a boy the father brings the gate posts from the kraal, and places them on the fire to keep the mother and son warm; this fire is kept burning brightly for seven days, by day and night. The mother is given the cord, which her husband uses to tie the legs of restive cows during milking, to wear as a waist-band. But should the child be a girl the mother has to use a strip of her own clothing for a band, and also has only ordinary fire-wood for her fire. On the seventh day, or when the umbilical cord falls off, a young sucking bull is brought, one of the veins is opened, and a pint of blood drawn from it and cooked by boiling it with a little milk: in many cases the umbilical cord is cut up and cooked with the blood. All the young children belonging to the same clan as the baby are invited to the feast, and crowds come as the dish is a favourite one. When the umbilical cord is not thus disposed of, the mother makes a little bag for it and wears it in her belt. After the meal the children sweep out the hut; they repeat the process four times, to remove all traces of the recent birth, and new grass is laid down upon the floor, this being the usual carpet. Whilst the hut is being cleansed the mother also goes through the usual form of purification: she first washes all over, then smears her body with brown earth peculiar to certain parts of Ankole, which has a sweet smell: she is given new clothes to wear, and may be visited or visit her friends without fear of evil happening to the baby or herself. When the child cuts its first two teeth in the lower jaw, the father brings a toy bow and arrows, sets the child upon the ground, and places the bow and arrows in its hands for few moments; they are then handed to the mother, who stows them away in some safe place in the hut. It is always said to be unlucky for a child to cut the upper teeth before the lower ones. When a child casts these same two lower teeth the mother preserves them with the bow and arrows; the father on this occasion brings a cow which has had only one female calf; he places the child on the cow's back, and from that time the child is fed upon the milk of the cow, no one else being allowed to drink the milk. The child's hair is also shaved off, except a bit left in a tuft on the crown, and on this tuft beads and cowrie shells are strung. The mother at this period makes a round of visits to her husband's relatives, and begs beads from them for the child's wrists and legs. From this time to the age of twelve years old the child goes through no further ceremony. At the age of twelve he is taken by the father to the elder of the clan, who instructs him daily in the art of cattle rearing, and also in the customs and beliefs of the clan. The boy remains several months with the elder until his course of instruction is complete, when he returns to his father and herds cattle until the time for marriage arrives; poor people remain with their parents as herdsmen after marriage, and are given a separate house in the kraal; wealthier people give their sons enough cows to enable them to start life for themselves with their own herdsmen.

A girl is placed upon the floor when she cuts her first teeth in the lower jaw, and a gourd for churning is placed in her hands, and afterwards stored away by the mother: as the girl grows up she is taught to cleanse the milk pots, and to churn the butter. When a girl begins to menstruate only her parents know it, the fact is kept a secret from every one else; the father sets apart for her use the milk from an old cow, she is not allowed to drink any other milk or eat any other food; when the first period is over the relations are told she is of age, and ready for marriage, and preparations are begun for this event.

The birth of twins is attended by no elaborate ceremonies; with the one exception of the clan mentioned above, the only thing that takes place is that the father makes the fact known by mounting the house or by standing in the doorway of the kraal and shouting, "My wife has twins." They prefer twins to be of one sex; it is unlucky to have them of opposite sexes. They are afraid to speak about them in a disparaging way lest a ghost should overhear them and be angry and cause illness in the clan. The children sleep in the same hut with their parents, but have curtains to separate their beds from their parents.

War.

The Bahima are a peaceable people, they seldom make war upon other tribes, their chief object in life is to live quietly with their cattle. Nevertheless, they have ever to be on the defensive, for other tribes have always looked upon their vast herds of cattle with jealous eyes, and whenever the chance has presented itself they have pounced down upon, and tried to carry off one of the herds. Sometimes a few good cows insufficiently protected may tempt the Bahima to make a raid, and the raid may end in war; this is however a rare occurrence. Their weapons consist of bows and arrows, a small shield, and spears. In battle there is no organisation: the men stand together in an unruly mass, now and again one man rushes out from the main body to shoot an arrow or throw a spear, and having done this he hastily retires into the main body again. When a rush is made it is done by the whole body; should the rush be successful the battle may be decided in one attack; should the foe resist, the attacking party must fall back and resort to other tactics. In such battles the loss of life is never great, ten or twelve casualties being considered a heavy loss. Before the king consents to the commencement of hostilities he sends to consult his ancestors as to the advisability of undertaking the war and the prospects of its success; a special messenger goes to the forest with a suitable present of cattle, the priest receives the messenger and, after offering some of the cattle to the sacred lions, he proceeds to consult the ghosts, giving special heed to the ghost of the king's father. If the answer is satisfactory the king chooses a general who collects his army by sending messengers to the leading chiefs in the country. The army consists, in almost all cases, of volunteers, each man brings his own weapons, and is responsible for his own food: the volunteers first swear allegiance to their own chief and then to the king. After battle they seek out their own wounded and dead, and take them back to their friends and relatives. They do not as a rule mutilate the dead, though at times when they wish to strike terror into the enemy's heart they do so; mutilation consists in cutting off the male organs and throwing them by the side of the corpse. As stated above there is no organised plan of march, or of order in battle, each chief is surrounded by his own retainers. All the weapons taken in the fight are the king's property: they are made up into bundles and placed at the king's feet; cattle taken also belong to the king, and he distributes them for herding, etc., as he thinks best. Should the enemy prove to be too strong, the king sends a valuable present of cattle and sues for peace.

Religious Beliefs.

The supreme deity is Lugaba, who dwells in the sky; he created man and beast; the world belongs to him, his smile is life, and the result of his displeasure sickness and death. This supreme being is not worshipped, nor are offerings made to him; he has no sacred place. Although they talk freely about him, and acknowledge him to be their great benefactor, they accept all his gifts as a matter of course, and make him no offering in return.

Kazoba is the god of war; when an enemy surprises them the women hastily decamp into the tall grass, or forest, when convenient, and call upon Kazoba to give victory to their husbands. When in distress the Bahima frequently promise votive offerings. When the danger is passed the women return home and place a pot of milk on the side of the fire, in the middle of the kraal where the cows gather for milking; each man as he enters the kraal takes up the pot, drinks a little, gives thanks to Kazoba for his preservation, and obtains his blessing for the future. In times of peace this deity is not invoked, and for all practical purposes might be non-existent, no one seems to give him a thought. One must not, therefore, conclude that the Bahima are an irreligious people; like most of the Bantu tribes their religion consists chiefly in dealing with ghosts of departed relatives, and in standing well with them; from the king to the humblest peasant the ghosts call for daily consideration and constant offerings, whilst the deities are only sought in case of great trials or national calamities. As stated above, the ghost of the king becomes a lion, and the lions have their priests to guard them and feed them. By constant attention, and by regularly being fed, these animals are said to become fairly tame and know the priests. The office of the priesthood is hereditary, the priest's children live with their father in the forest, and become acquainted with the duties of the office in their early days. In the temple certain fetiches are kept, and thither the priest retires for the purpose of holding intercourse with the ghosts; only the king and wealthy people are able to consult these ghosts because of the large offerings of cattle required to propitiate them. The ghosts of the common people go south to Karagwe, which is the place of rest or ghost-land; from there the ghosts pay visits to their old haunts and interest themselves in current affairs; for this reason huts are built for them, and offerings of food, beer, and clothing are placed under these for their use; each ghost must have its own hut and food. Ghosts of people more recently dead receive more attention than those of people who have died long since, though, should a priest attribute, illness or other calamity to the negligence of the relations in not taking care of the grave, or making offerings to the ghost of some one long since departed, the hut is restored, and suitable offerings placed in it. Various illnesses are attributed to the influence of ghosts, and offerings are made to propitiate them, according to the advice given by the medicine-man, who is able to discover which ghost has caused illness, and its reason for doing so. Some of the ghosts become very wealthy in cattle and slaves from constant offerings made to them; the cattle are sacred and are watched over by the relations of the deceased person to whose ghost they belong. When these cows have calves the guardian chooses one of his children to drink the milk of the cow. During the first week or two, whilst a piece of the umbilical cord adheres to the calf, the child may touch no food or milk from another cow nor may he eat salt. When the umbilical cord comes away, the father takes a pot which must have no flaw in it, not even a chip out of it; this pot he fills with milk from the cow in question, and takes it to the child's mother, who drinks as much as she wishes, after which she places the pot near the fire. The child is then brought in and has to drink the remainder of the milk. This ends the tabu, other members of the family may drink the milk, and the child may eat other food and drink milk from other cows.

In addition to the deities common to all clans alike, each clan has its own special deity who alone takes an interest in that particular clan; to this deity the clan resort for help or advice. Women are fruitful or barren as the clan deity desires; the husband addresses the clan deity when he desires to obtain children, and he also commits his wife to its care during her time of pregnancy. Should a wife fall ill, the clan deity can assist when all other remedies have failed. Each native hut has its dais of earth 15 to 18 inches high and 5 or 6 feet long, usually made on the side of the hut opposite to the door; it is carpeted with sweet-smelling grass. Upon this dais the milk pots are placed, and at the other side the *mayembe* (fetiches) have their place; the *mayembe* are made of buffalo or antelope horns which are filled with sacred ingredients by the priests of the respective deities; others are of wood, decorated with mammal or lizard skins, and beads; others are of clay moulded into various shapes, and bound in bits of leather. These fetiches (*mayembe*), like many symbols used by Christians, are not deities, but have the powers and blessings of the deities they represent, and are able to confer boons on the possessors; through them also the deities are approached. It is to these fetiches (*mayembe*) that the daily offerings are made; each one has a small round hole in it, about 3/8 of an inch in diameter and about an inch deep, and into these holes medicines are poured in case of sickness as the priests prescribe. Sometimes the medicine is for internal use, sometimes for external application. The smaller *mayembe* are worn for protection against evils of all kinds, rarely, however, does a *jembe* protect or help against more than one kind of evil. The chief *mayembe* are:—

1. Wamala.
2. Kagora.
3. Nyekiriro.
4. Lyagombe.
5. Mugasa.
6. Kyomya.
7. Ndahora.

These *mayembe* are treated with great respect and always occupy places of honour; the war *mayembe* are venerated and have offerings of food and wine, and prayers are made to them daily by the wives when the husbands are with the army engaged in hostilities. The warriors obtain special *mayembe* before going to war, the hunter has his special ones when hunting; others are worn as protection against small-pox and other much dreaded diseases. When armed thus the wearer moves with fearlessness in the midst of dangers; should misfortune attend him or the *jembe* fail to protect him, his faith is not shattered, he attributes the failure to stronger power working against him, or to magic which changed the normal course of events and caused failure in a particular case, or he may have forfeited his right of help through some inadvertence or slight to the deity.

TRANSMISSION OF DISEASE FROM A HERD OF CATTLE TO ONE ANIMAL.

If at any time disease breaks out amongst the cattle, a priest is called in and has the symptoms of the disease described to him; after hearing how the disease first began and all about it, he resorts to divination to discover the cause of the sickness. When the cause has been decided, he collects herbs and other remedies to attract the disease from the cattle. An animal is chosen from the herd in the evening, which is to be the scapegoat for the herd; the herbs, etc., are tied round its neck, with certain fetiches to ensure the illness leaving the other animals; the cow is driven round the outside of the kraal several times, and afterwards placed inside with the herd for the night. Early the following morning the animal is taken out and again driven round the kraal; the priest then kills it in the gateway, and some of the blood is sprinkled over the people belonging to the kraal, and also over the herd. The people next file out, each one jumping over the carcase of the cow, and all the animals are driven over it in the same way. The disease is thus transferred to the scapegoat and the herd is saved. All the fetiches and herbs, which were upon the scapegoat, are fastened upon the door-posts and lintel of the kraal to prevent the disease from entering again.

TABUS.

No man or woman is encouraged to wash with water, in fact every one is discouraged from using water; a man may smear his body with butter or clay as often as he wishes, but to wash with water is bad for him, and is a sure way of bringing sickness into his family and amongst his cattle.

Milk must never be boiled for food, it causes the cows to fall ill and die. As mentioned above, when a boy is set apart to drink the milk of a dedicated cow, all other food and milk are tabu to him.

Serfs are chosen to drink the milk of ordinary cows which have calved, until the umbilical cord falls from the calf; in this way the owner and his family escape the food tabu which restricts them to one cow's milk, and are able to enjoy other milk also and thus obtain a more liberal supply of food.

The following is a list of foods which are prohibited to the cowmen:—

Any part of goat, sheep, or fowls; among vegetables, peas, beans and potatoes. To eat these and at the same time to drink milk would endanger the life of the cow from which the milk comes, and her calf.

Should the king have cause to remove a chief from his office, he is tabu to the king and people until he has visited the lake at Karagwe and undergone the purificatory rites. The priest administers an emetic, and a strong purgative, and after being washed by the priest in the lake the man is permitted to return home.

MURDER AND MANSLAUGHTER.

Murder is punished by death, hence a murderer plans his deed with a view to escape into some other country, or to some place where he is not known or likely to be traced by the avengers of blood. It is the positive duty of each member of the clan of a murdered man to seek out and bring to justice the guilty person; if ordinary means fail to trace the murderer they seek out a clever diviner, who, by his magical arts, is supposed not only to discover the perpetrator of the murder, but also his motives for the deed. Should the person accused be found, he is put upon his trial, and if he denies the deed he must go through various ordeals to prove his innocence: it is next to impossible to escape death, because the reputation of the diviner is at stake, and he cannot allow that he has made a mistake, unless the relatives of the accused make it worth his while to find some other scapegoat. Should a murderer escape, one of the clan is seized and put to death, unless the clan rises and rescues him; if the clan rises the case goes before the king for trial; the king invariably settles the matter by imposing a fine. But more frequently the murderer or the person seized in his stead is put to death before the members of the clan have time to rise. In some cases of murder, the clan of the murdered man may refuse to accept the fine ordered by the king; they wait on in the hope of finding the murderer, or until they are powerful enough to fight the clan of the murderer and kill some one of it. Directly a case is settled either by fine or by a substitute being killed in his stead, the murderer can return, his clan will receive him, he may go home; even the relatives of the deceased will bear no ill will towards him.

In a case of manslaughter the perpetrator usually goes at once to the chief of his clan and tells him in detail the circumstances, and asks him to arbitrate between himself and the relatives of the deceased; if the relatives are satisfied that there was no malicious intention, they name the sum for the fine and the matter ends.

HUNTING.

Only a limited number of men in certain clans are huntsmen. They keep a few dogs for hunting the game, and use long nets supported on strong stakes to form a fence 4 feet or 5 feet high and enclose a large area. The game is driven into these inclosures, and men spear them down. When a huntsman, going to hunt, meets a woman, he gives her a few strands of the net to hold for a few moments before she passes on; should he omit to do so he will catch nothing, his luck will desert him.

COUNTING.

The Bahima have names for numbers up to ten, after which they count by tens plus the units; thus eleven is ten plus one, fourteen is ten plus four, and so on to one hundred. When speaking they not only use the terms for numerals, but also make signs with the hands. For instance:—

1. *One,* is indicated by extending the index finger, the others being folded inside the palm of the hand.
2. *Two,* the first two fingers are extended, whilst the third and fourth are folded into the palm with the thumb resting against the first joints of the two fingers.
3. *Three,* the second, third, and fourth fingers are extended, whilst the first is folded into the palm of the hand, and the thumb rests upon the nail of the first finger.
4. *Four,* all the fingers are extended whilst the thumb is folded into the palm.
5. *Five,* the thumb is closed into the palm, and all the fingers closed over it.
6. *Six,* the first three fingers are extended whilst the little one is bent inwards, and the thumb rests on the nail of it.
7. *Seven,* the second finger is bent in, and the thumb rests upon the nail of it, whilst the first, third, and fourth are extended.
8. *Eight,* the first finger is placed under the tip of the third which is used as a lever from which to flick the nail on to the second finger, causing the flicking noise to be heard in any part of the room.
9. *Nine,* all the fingers are extended, the second is brought forward out of line from the others, and bent backwards and forwards.
10. *Ten,* the hand is closed with the thumb placed against the side of the middle joint of the first finger.

In most cases the person who uses the signs also repeats the number, though at times the sign only is given.

Numbers from ten to one hundred are called so many tens; thus, twenty is two tens, forty is four tens, and so on. One hundred is called a herd (*egana*), and all herds of cattle are divided up into hundreds; each herd of one hundred has one bull allotted to it, they therefore speak of each herd as one bull. They have little or no use for numbers beyond tens except for their vast herds of cattle.

TIME.

A year of twelve months is divided up into three parts as follows:—

Kyanda has six months.
Akanda, a season of four months.
Itumba, a season of two months.

At each new moon the people all turn out from their huts, and clap their hands; each man makes a fire before his hut which is kept burning for four days, and is not allowed to die out. The king's drums are brought outside, and men beat them for four days incessantly. Each moon (month) has twenty-nine days;

twenty-eight during which they can see some part of the moon, and one day when it is invisible.

The day is divided as follows :—

6 a.m., *kasese,* milking time.
9 „ *katamyabosi.*
12 „ *baliombulago,* rest for the cattle.
1 p.m., *batola masumba,* time to draw water for the cattle.
2 „ *amasyo ganyuwa,* time for the cattle to drink.
3 „ *amasyo gakuka,* cattle leave the watering-places to graze.
4 „ *ezigoba,* the sun shows signs of setting.
5 „ *ente zehiririri,* the cattle return home.
6 „ *ente zataha,* the cattle enter the kraal.
7 „ Milking time.

The year begins with the first heavy rains and is counted to the next rains : the number of months to the year is a minor matter, there may be more or fewer months in a year according to the rains, which some years are earlier, and other years later. When the euphorbia trees begin to sprout and show signs of life they know the rains are at hand.

DRESS.

The national dress of the Bahima is, as we should expect, made from the hides of cattle. The men's apparel is scanty whilst the women are carefully clothed; the women's dress consists of two large cow hides, one from a white cow the other from a red one. These hides are dressed first by stretching them out in the sun ; numbers of wooden pegs, 6 inches or 8 inches long, are used, and the skin drawn out in every direction and pegged into the earth, leaving a clear space underneath it for the air to pass. When the skin is thoroughly dried it is rubbed on the smooth side with butter and worked; this is continued until the skin is perfectly soft and can be folded up like a bit of linen. When the skins are dressed they are cut into strips 3 inches or 4 inches wide and sewn together, first a red and then a white strip being used to form the cloak. Two such robes form the dress of a woman; one is fastened under the arms and extends down to the ankles, it is secured round the waist with a band of leather ornamented with beads. Should the husband die before the wife has a child, the waist band is taken from her, for this band is a mark of a married state. The other robe is placed over the head and falls down below the knees covering head and face so to hide them entirely from view ; they use only a small opening through which they look to walk. No woman may uncover her head in the presence of any man of her own clan, though before strangers she may do so. On the neck beads and other charms are sometimes worn, and also one or two hairs from an elephant's tail. Young girls wear their hair long, with beads, cowrie shells, and other things which may take their fancy, plaited into it. The married shave their heads from time to time, except during the time of mourning, when they must not cut or shave it even though it may grow very long.

The men wear bull skins dressed in the same way in which the cow skins are prepared for the women, but theirs are smaller and worn over the shoulders only, whilst the lower part of the body is exposed. They also wear charms of various kinds on their necks and on each wrist one large copper or brass bracelet, and they wear a number of anklets on the left leg, but only a few are worn on the right leg. Youths wear small skins round their loins as a general rule, sometimes when about their own homes they wear sheep skins on their shoulders. The skin of a cow which has cast its calf, bound round the edges by the tail of a leopard skin with the tip of it hanging down from it, is the dress of young princes. All men and boys keep their heads shaved. In some cases bark cloths for clothing are obtained from the Baganda; they are, however, well dressed with butter before they are worn. During times of mourning they wear bark clothes which have no butter dressing.

MAGIC, ETC.

Any portion of a person's clothing, a bit of hair, nail parings, spittle, a bit of grass which a person may have had in his mouth and thrown down, or earth where one has relieved nature, are eagerly sought for and carried off by those who wish to exercise an evil influence over the man or woman: any of these are taken to the priest to enable him to make the person ill or even to kill him. In some cases a man will persuade his sister, or some woman with whom he is intimate, to make love to his enemy, or the person against whom he has a grudge; when she has succeeded in having connection with him, she gives her brother or lover some of the semen to enable him to carry out his designs, and prevent the man from having children in the future. The native has therefore to be ever on guard against all kinds of possibilities which may arise from leaving about, or dropping articles which have emanated from, or come into contact with, his person. A sick person will call in his magician, or medicine maker, who has to discover who the person is who has bewitched him, and also find the remedy for his illness. The origin of illness is determined by examining the entrails of fowls, sheep or goats, or by a pot of water into which powdered herbs are cast to make it froth, and four coffee beans are dropped. The positions of the berries in the water, or the specks on the entrails of the animals, enable the medicine man to decide who has used magic. Once the person is discovered by these tests, the relatives of the sick man go and accuse the person, his plea of innocence is useless, he must prove it; in most cases the accused acknowledges his fault, states his reason for committing it, and tells what drugs must be used to heal the sick man. Should a person continue to deny the charge brought against him, the case goes before the king, and, if he still persists in asserting his innocence after the king's verdict, he is put to the fire ordeal; if he comes out without hurt he is acknowledged to be innocent; but if he is burned he is heavily fined.

A child is never allowed to see its own shadow cast upon the wall by firelight; the shadow will become a ghost if looked upon by the child, and will catch and kill it.

When a person is caught making magic to bewitch anyone, he is deprived of all his property, and left in abject poverty: he is never again allowed to herd cattle for anyone, and thus becomes an outcast and must either cultivate the land and live upon vegetables, or leave his country, seek a home in some place where he is not known, and become a herdsman in some other tribe.

Sometimes ghosts enter huts and take up their abode to trouble members of the house. In such cases the medicine man is called in and allures the ghost into either a horn or a pot, by magical arts; having got the ghost into the vessel he secures the opening with a strip of hide or bark-cloth, conveys it to some distant place, and deposits it there imprisoned in the vessel.

When women retire to relieve nature they take a small gourd with a longish neck in which is a mixture of tobacco and water, the water is then poured through a small hole in the gourd's neck over the parts to prevent evil spirits from entering the person whilst thus exposed. Rumbling noises and abdominal pains are signs of possession by spirits.

Building and Other Industries.

The Bahima are not a progressive tribe. Their huts are of the most primitive beehive kind, consisting of a framework of sticks, with a few stouter branches or saplings, the whole being covered with a rough layer of grass scarcely worthy the name of thatch. The huts are ranged round the kraal and are seldom closed. The more important chiefs and people have larger huts with three or four tree stems planted in the ground to support the roofs, and a little more care is bestowed upon them in building; inside there is a place for the calves, and the dais upon which the milk pots and the *mayembe* (fetiches) are placed. The divisions in the huts are formed by hanging skins or bark-cloths from the roof as mentioned above. The bedsteads are formed by planting four stakes with forked tops into the ground, the two for the head being longer than those for the feet; in the forks the head-piece and the foot-piece are laid, and the side pieces tied upon these; over these cross-pieces are laid and then a hide on the top completes the bed. The wealthy people may have a few bark-cloths or bed covers, but the majority only use their ordinary clothing; many of the serfs have no bed at all, but lie on the floor where they happen to be near the fire, covering themselves with the scanty bit of hide generally worn over their shoulders; children rarely have a bed, they go to sleep where they are when drowsiness comes upon them. The kraal is seldom more than a rough stockade of trees planted between the huts in a circle, the tops being bound together by a creeper. The trees often take root and form a growing fence. The gateways into the kraals consists of two strong side posts with a cross-piece on the top to form a lintel. On this cross-piece are suspended a number of logs, which during the day are raised to allow the cattle to pass out and in at morning and again in the evening, after which the logs are let down and secured on the inside of the doorway for the night. Most kraals are only fences of thorns made between the rough huts, with a gap for a gateway into which a thorn bush is dragged each night when the cattle enter. Only the king and leading chiefs have the more permanent kraals and huts, the others are built in any place where the cattle can find pasturage, and when they move on again these are deserted. During the building of a house, or the making of a new kraal, the wives remain so chaste that they are not free to entertain visitors, or other relatives of their husbands; but remain constant to him until the new place has been occupied. Spears are generally made by the smiths of the Bahera tribe, who also make hoes, iron bracelets and anklets: the wooden pots and drinking cups they make themselves: the pottery in use is generally made by the serfs, though a few of the Bahima are especially skilled in making pottery. Both their pottery and the wooden milk pots are peculiar to themselves, other tribes rarely copy their designs and shapes. The iron ornaments, weapons, and hoes are generally bought from the smiths for meat or bulls, or cows which have ceased to bear.

BROTHERHOOD.

When two friends wish to enter into closer and more binding relations they make "blood brotherhood": this is done by pouring a little milk into the palm of the hand and dropping into it one or two drops of blood taken from the pit of the stomach. The parties sit opposite each other and A first draws the blood from his stomach and mixes it with a little milk in the palm of his hand; B drinks it, placing his lips into the hand and sucking it up; B then does the same, and A drinks the mixture from B's hand. Each promises to be true and faithful to the other, and to be a father to the other's family in case of need. Sometimes coffee berries are used for this ceremony: a single bean is split, one-half being taken by A and the other by B: the bean must be taken from the palm of the hand with the lips, and not lifted by the fingers. To call a person in and invite him to drink milk is also a sign of friendship.

MUSICAL INSTRUMENTS.

The Bahima are not a musical people, they have few songs, though the young men frequently congregate in the evenings round the fires with their beer pots, and sing; at such times the music is vocal, no instruments accompany them. For public dances drums are beaten; these drums however are not original, they have been introduced into the country from neighbouring tribes. The only instrument which can be called peculiar to the tribe is a harp used by the women (Plate XVI, Fig. 4): this instrument is played in private, and is seldom seen out of the house; the women use it to accompany the love songs which they sing to their husbands.

GAMES.

Wrestling is the favourite amusement both for men and boys amongst the Bahima; in this they revel, and have constant contests with large crowds of onlookers, who urge on the competitors. There is a great deal of skill shown, and frequently the champion is not the heaviest or strongest built man, but one who has acquired the trick of throwing his opponent; a throw is not considered valid unless both shoulders of the man thrown are brought to the ground.

High and long jumping is another form of sport.

A game resembling nine-pins is played: seeds of a large kind, four or five inches long, are placed in a line for pins, small stones are thrown to dislodge them from their line; the competitors stand at a given number of paces from the seeds, and he who knocks out most of course wins the game. Boys play a game of spinning stones from a fruit not unlike a plum; the stones from it are smoother, and the pointed end not so sharp as the plum stone. A board, rock, or any place with a hard smooth surface is chosen, two boys seated opposite each other spin their stones at the same moment, and in such a way the stones knock against each other until one falls. The boy whose stone spins longer wins; forfeits are paid in these two latter games.

Boys make models of cows either in clay or from large seeds; sometimes these models are coloured by ashes or different coloured clay.

SALUTATIONS.

The Bahima shake hands when meeting a friend, or when taking leave for a lengthy period: the words used when they meet are:—

In the morning, *Orirege*, how have you slept? the answer is *Orirege*, which implies "well," though the answer only repeats the question, how have you slept?

Later in the day the salutation is *Osiberege*, how have you spent the day? and the answer again merely repeats the question, *Osiberege*, how have you spent it? the person is understood to accept the implied answer, "well."

A parting salutation is, *Osiberege*, which may be translated, "keep well"; the reply is *Osiberege*, "keep well."

Although in all these cases the question and answer consist of the same word, yet the word is intoned differently in question and answer, and this difference of intonation conveys a different meaning.

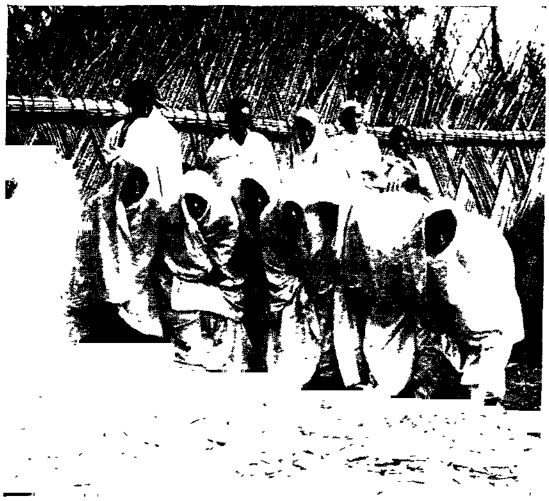

FIG. 1.—ANKOLE WOMEN RESTING.

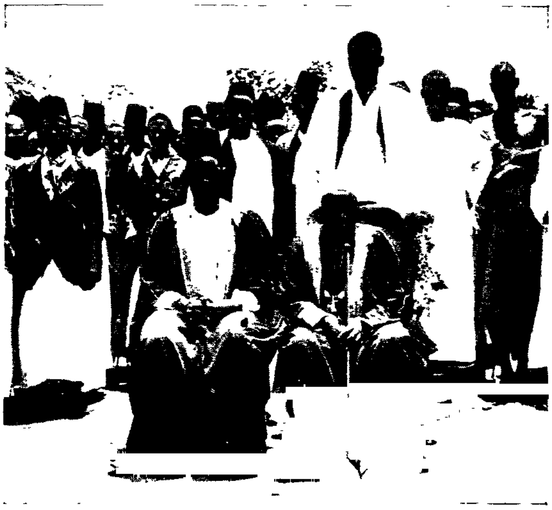

FIG. 2.—THE KING AND PRIME MINISTER OF ANKOLE.

FIG. 3.—BAHIMA HUTS.

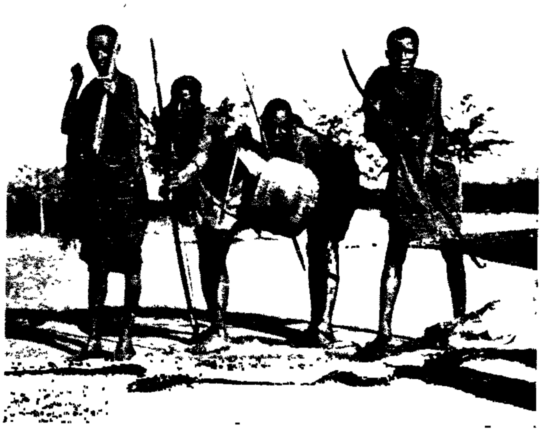

FIG. 4.—BAHIMA WARRIORS.

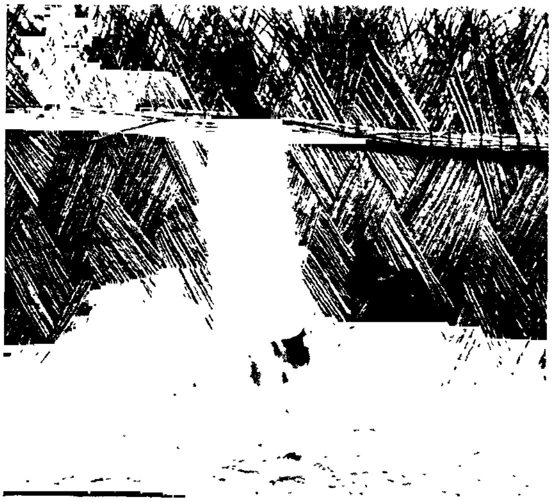

FIG. 5.—MUHIMA CARRYING MILK IN WOODEN POTS.

FIG. 6.—GROUP OF BAHIMA.

THE BAHIMA.

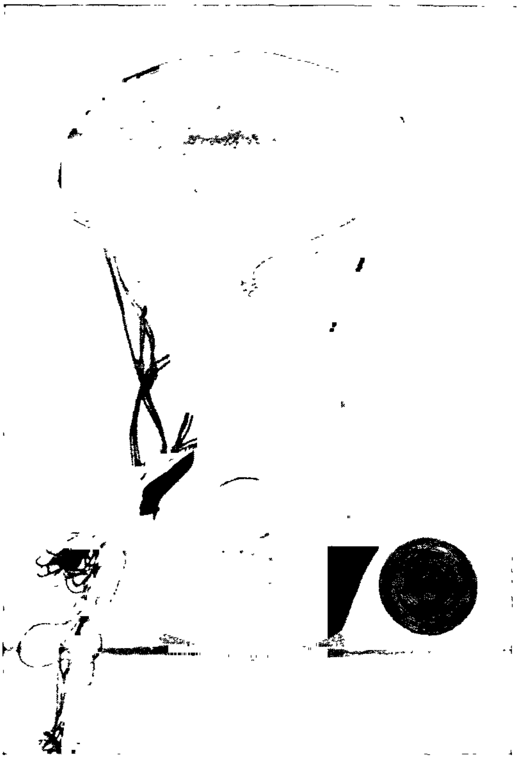

FIG. 1.—WOODEN MILK POT PLACED IN POSITION ON FUMIGATOR.

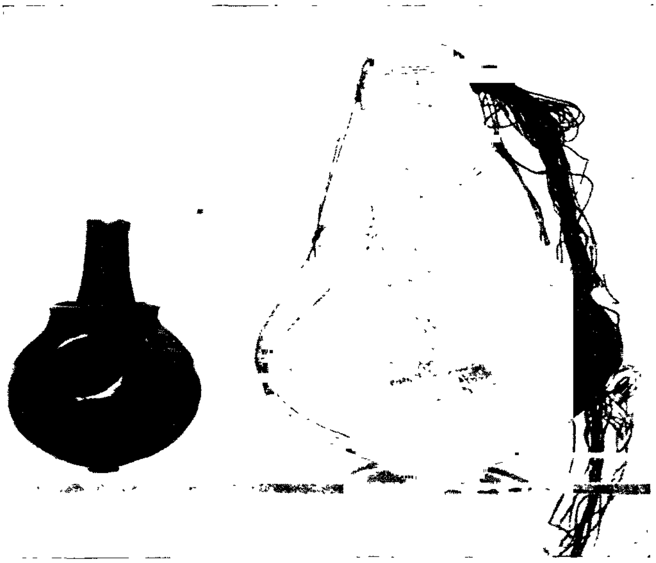

FIG. 2.—WOODEN MILK POT WITH POTTERY FUMIGATOR.

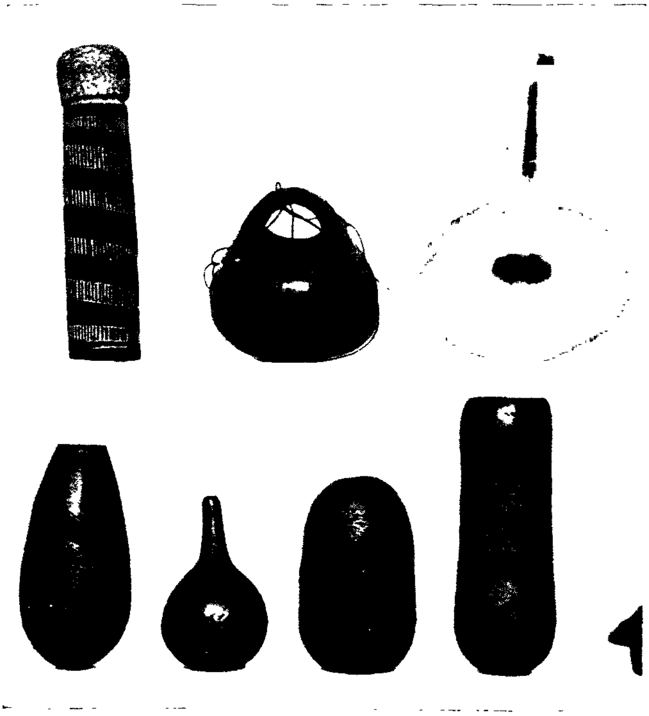

FIG. 3.—POTS, GOURDS AND WOODEN NEEDLE HOLDER.

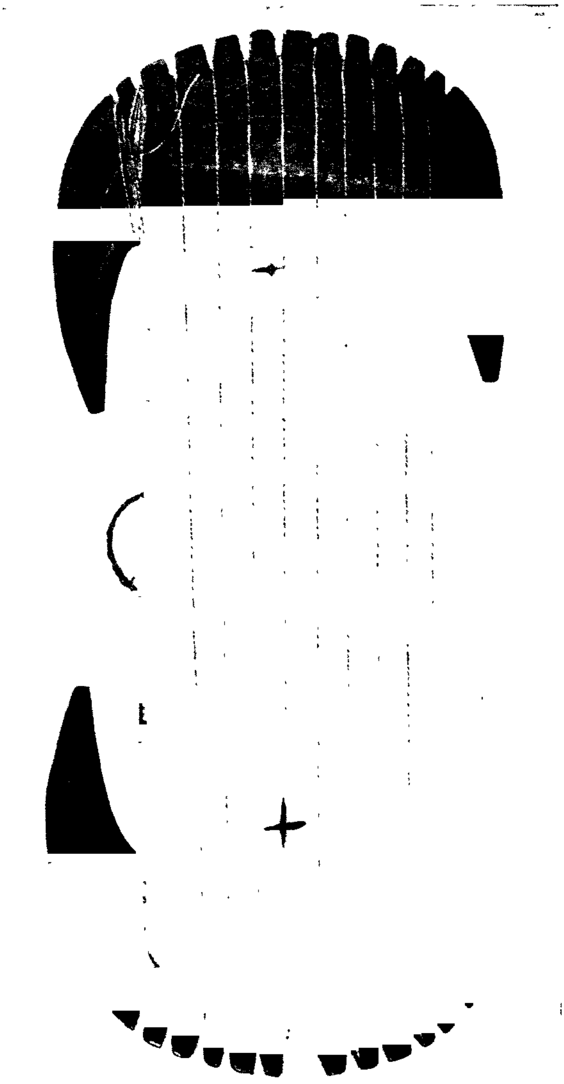

FIG. 4.—HARP.

THE BAHIMA.

NOTES ON THE NATIVES OF NYASSALAND, N.E. RHODESIA, AND PORTUGUESE ZAMBEZIA, THEIR ARTS, CUSTOMS, AND MODES OF SUBSISTENCE.

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Arts.

Brass Anklets and Bracelets.—These are made from empty cartridge-cases, brass wire, etc. The crucibles, made of clay, are filled with cartridge-cases, which are heated in a charcoal fire, blown by means of bellows made of goat skin flayed in the form of a bag and attached to a wooden mouthpiece at one end, and to a stick at the other, to pull it open and shut. The crucible is held by a pair of long iron pincers. A mould is made by holding a stick upright and piling white powdery sand round it next to the stick, and supporting this outside with wet sand. The stick is then withdrawn, and the metal, when molten, poured into its place. This makes a stick of metal when cool, which is then hammered round to form the anklet or bracelet.

Anklets.—Made of the seed of wild banana (*sarakoto*). Holes are bored in the black seeds with a red-hot nail, and strung on string. Used to make a rattling sound in dancing.

Chipini.—Made of solder. Originally came from Zanzibar and bartered in this country in the ivory trade, etc., which used to be carried on. Now they are made in this country.

Bark Cloth—Chiondo (Chinyanja).—Made of *mtawa, kachiri, bwazi*, and other trees. A circle is cut round the tree at the top and another at the bottom of the piece of bark to be removed. The circles are then connected with a vertical cut A piece of string or *luzi* is tied round in the upper circle, and worked round and down under the bark until the bottom circle is reached, when the whole piece comes off. The outer bark is stripped off, leaving the inner bast; this is hammered with a piece of wood shaped like an axe, and then rubbed with oil or remains of powdered *ntesa* nut till soft.

Mat-making (as made by Chapeta).—*Mabango* (reeds), sometimes called spear-grass (*chiyaolitete*), gathered green, are split into about six strips, leaving about eight inches of reed unsplit at the bottom. This unsplit end is afterwards chopped off, but is left at first, so that the different strips of the same reed will join where they were originally cut, when they are sewn together afterwards. The reeds are then put in the sun for from three to five days, after which they are soaked in water for one night to make them soft. The strips are now sewn, or rather threaded, together side by side with *chingwe*, a joint or thick part of the reed being chosen to thread through. The eight inches of butt is then chopped off.

Needle.—The needle (*nsingano*) to sew the mats, described above, is a curved piece of iron, generally about eight inches long, pointed at one end, with a hole in the other, through which the string is threaded.

Preparations of Salt from Grass.—Certain kinds of tall grass are gathered, dried, and burnt. The ashes are collected and put in an earthenware vessel, with a small hole in the bottom. They are well pressed down and the pot placed on the top of another empty one. Water is put in the first pot and filters through to the second, dissolving the salt. This salt water is either boiled down to a thick fluid or used as it is to cook food in.

Salt is made from the ashes of *gumbwa* (papyrus), dried and burnt, also from a grass called *chesa*. There is extensive manufacture of a very impure salt in this way west of Kambwire's, near Loangwa, at Chichere, where the ground and the water is full of gypsum and salt, and presumably the grass takes it up from the earth. A still greater amount is made south-east of Bangweolo. In Chapeta villages baked clay basins, for making salt in, are seen in the earth.

Preparation of Castor Oil.—The bean (*nsatsi*) is picked from the bush (*msatsi*) before it is dead. The inside bean is taken out and dried in the sun, then fried on a tin over the fire, pounded and put in a pot with water, and simmered. The oil floats to the top and is skimmed off.

Preparation of Ground Nut Oil.—This is prepared in the same way, but can also be made by pounding alone.

BURIAL CUSTOMS.

When a person dies he is wrapped up in calico and carried to the grave. The sister, daughter, or son of the deceased takes a basket of flour and proceeds in front of the procession, scattering it at the cross roads or any path coming into or leaving the one taken. This makes the body glad and therefore lighter, so that they get to the grave sooner. Then the grave is dug. If a man cuts or hurts himself while doing this, it is said that the spirit (*mzimu*) of the deceased is angry with him. After interring the body and filling in the grave, flour and water are put into a pot, and, sitting round, the brother or father of the deceased, at the head of the grave, says to the spirit, "Now you are gone we will not see you again. You must forgive anyone that has done you harm in the village. You have left so many wives, sons, daughters, brothers, etc.; your spirit must take care of them and keep the evil spirits away." The pot is then broken over the head of the grave, and the party returns to the village. On the way back, if they pass any water they all wash.

On returning to the village all the mourners sleep outside the deceased's house for several days; then, after shaving their heads, they depart, leaving only the family. The roof is then lifted bodily off the hut and put on the ground, the walls are taken down and piled round the roof and the family live there till the mourning is finished. Sometimes only the mud walls of the verandah are knocked down, to show that it is not occupied, and the hut allowed to stand. After perhaps three years, it is burnt.

When the mourning is over, all the people again assemble, and a pot of beer is broken over the roof of the hut as it lies on the ground. Then the mourners are shaved and the ceremonies are over. The whole body is shaved.

Perhaps four or five days after the mourning is finished the wives of the deceased are again married. The brother generally takes his deceased brother's wives or arranges for their marriages. If he does not want them himself, he gives them the knife or spear. (See MARRIAGE CUSTOMS, p. 122.)

On the death of a chief, the new chief (even if he be the son) generally takes the late chief's wives, excepting, of course, his own mother.

The Ayao and Atonga bury the body with the head to the west and feet to the east, with the eyes turned to the north-west so as to see the new moon on the first day. The Achewa bury north and south; head to north, eyes turned south-west.

DANCES.

Chinamwali Dance.—This is held by most tribes on the first appearance of the menses. Girls are generally married previously to this. When this takes place girls are called *namwali*; before that a girl is a *mwana*, child.

The Ayao call the first menses *chiputu*, and a dance called *Unyago* is then held, lasting perhaps ten days. The Atonga call it *Mwali*. The Manganja, Achewa and Achapeta call the dance *Chinamwali*, and during its course the elder women give homely advice to the *anamwali*.

The Achewa hold *Zinyas* (picture dances) in the evenings during the *Chinamwali*. These are a kind of mumming.

The Angoni husband does not sleep with any other woman or any of his other wives while one of them is going through the *Chinamwali* ceremonies, but sleeps with her when she returns. If he sleeps with any other woman during this time there is a superstition that the *namwali* may become ill or die. After the ceremonies are over, the *namwali* has her head and eye-brows shaved and is dressed up in clean clothes. Dances are held after this.

A native woman is very little upset by the occurrence of menses, and works in the fields or carries loads just the same as usual, but a string or bit of grass is generally tied round the head, as for head-ache. A woman also makes no fuss about childbirth, and works up to the last moment. It is a common occurrence for a child to be dropped while at work in the fields. The woman performs all the necessary offices, picks up the child, and walks home.

Enceinte Dance.—When a woman has been six months enceinte a dance, called *Litiwo,* is held among the Ayao. Men are not supposed to commit adultery while the wife is in this condition, or she may get ill or die, but they may sleep with their other wives.

LAW OF SUCCESSION.

The Atonga, Ayao, Achapeta and Achewa make the new chief from among the brothers of the old, should there be any. It need not necessarily be the next eldest, but one selected from amongst the others. The Angoni and Swahili make the son chief.

MARRIAGE CUSTOMS.

Achapeta, Atonga, Achewa.—The maternal uncle (*msi bweni*) of the girl is asked first by the intending husband. He arranges with the father and mother of his niece (*mbumba*). He afterwards takes the intending husband's present to the father and mother, and gets a small share of it. A man whose brother-in-law had died, having charge of his sisters, nephews and nieces, is said to have a lot of *mbumba,* this word then being used collectively.

When husband and wife fall out or do not suit each other, if the latter's parents take her back, the original present or its value is returned to the husband, and he gives the *msi bweni* a knife or spear in token that he abandons all claim on her, and will not interfere with her next marriage. Anything he may have given her during their married life is considered as payment of the work she has done for him. If, however, the husband marries her to another husband without the *msi bweni's* participation, the new husband has to pay the old for her.

Ayao.—The brother is first asked about the marriage, and arranges it with father and mother. The present is divided between father, mother, brother and maternal uncle.

Among the Ayao it is a common thing for two men who are friends to lend each other their wives. If a man's wife admits that she has committed adultery, he sends to the co-respondent to say he has found out, demanding a present. If the present is not suitable, or if it cannot be arranged privately, the case goes before the chief, but it is more usual to arrange the matter privately. Sometimes the co-respondent, instead of a present, lends his wife for the same number of nights as he slept with the other man's wife.

CUSTOMS.

Filing Teeth.—The Awisa sharpen their teeth to a point; this process is commonly referred to as filing, but in reality it is done by means of a very small axe, a small block of wood being placed in the mouth under the teeth while being chopped. The younger men are now giving up the practice.

Awemba Villages.—The Awemba or Wawemba of Chambezi River and the vicinity appear to be constantly changing villages, having at least two, a dry-weather one on the banks of the river, and a wet-weather one inland. The wells at the latter appear to dry up generally in the dry weather, necessitating the change to the river, but it is used during the rains and is the cultivated village, and is usually surrounded outside the plantations with a game fence.

Mutilation.—The Awemba used to punish extensively by mutilation, and an enormous number of the population at the present day bear testimony to the rule before the country was taken over by us. Many are seen without a single projection on their bodies—nose, ears, fingers, lips, penis and toes being cut off, all of which they have survived with nigger vitality. To heal the severed part, they were accustomed to bury the member in river mud and remain there till it had healed.

Mourning.—The Angoni women wear plaited or twisted strings of grass round the head (*Nt'hambo*).

The Achapeta women (*ofedwa*)[1] wear a grass head-dress differing from that of the Angoni.

Eating.—The Angoni wash the right hand, take *nsima* from the dish with the right hand, roll it in a ball, and then dip in the *ndiwo.*

Small flowers of *sasama* are sometimes used as *ndiwo,* also leaves of devils' pitchforks (*zyazongo chingoni*).

Nkufi.—*Nkufi* is a poisonous kind of tick which gets into the walls of huts and lives there. Whole villages are often deserted on account of *nkufi,* as the bite often induces sickness in the native.

The Angoni eat lion and leopard's hearts to make them brave.

All the tribes appear to use tobacco.

The Atonga, Chapeta and Yao use pipes (*kaliwo,* plural *akaliwo*) and also snuff. The Angoni chiefly take snuff and seldom use a pipe—*chikololo.*

Cultivation of Tobacco.—*Names of Tobacco* (three kinds):—

(1) *Fodia Masuku,* as grown at Tagonera's village and the country between Mvera Mission and Lake Nyassa.
(2) *Fodia Kapeni,* as grown at Fort Manning.
(3) *Fodia Kambuya,* as grown at Kapilama's in Kalumbi Hill and also at Mzama's.

Native tobacco is strong and hot, and will make one hiccough if smoked in one's pipe.

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[1] = bereaved.

Tobacco appears to be in use amongst all the tribes. The method of preparation, however, differs.

Tobacco (*Fodia*, Chinyanja; *Soona*, Yao; *Forro*, Angoni) is prepared as follows by:—

The *Atonga.*—A raised platform having been made in a shady place, the leaves are picked, and without removing the ribs, are laid in heaps on banana leaves on the platform. More banana leaves are laid on the top and then weighted down with stones. They are left compressed like this for about three days; then they are unpacked, and put in the sun for a few hours in heaps of three or four. The tobacco is now ready to smoke or chew, and is put into a bag. *Ku-Koka Fodia Chinyanja* = to smoke, *i.e.*, to draw tobacco.

The *Angoni Chapeta.*—(1) The leaves are picked when ready and the mid-ribs torn out. The leaves are then pounded slightly between stones to make them soft, and rolled up tightly into a ball called *Chambwa.* (In Yao and Chinyanja it is called *Wamponda.*)

The *Chambwa* is then dried in the sun for several weeks. It is now ready for use, and is cut off as required.

(2) The mid-ribs are removed and the leaves rolled up tightly. Bark rope is tied tightly round the outside, completely covering it. It is then dried in the sun for several weeks, when it is ready for use. It is hard and long, and is cut off as required. Called *Mturgo.*

The Achapeta often hollow out the centre of a corn cob, stuff it with tobacco, and smoke it in this manner.

The *Ayao.*—The leaves are, picked, put on the verandah of the hut for several days and then twisted up tightly into a rope called *Chingwa.* They are then dried in the sun for about a week.

Preparation of Snuff. Snuff.—Fodia Onusa (*i.e.*, tobacco for smelling) is prepared in various ways.

Atonga, Yao, Swahili.—(1) Tobacco is pounded between two stones and mixed with ashes from banana ribs, or ashes made from small branches of the *Masuku* tree, or ashes of certain other trees.

(2) Salt water is made from ashes of cassava (*Chinangua*) or banana ribs (*Ntochi*). This, when it is to be used for snuff, is called *Magarri.* The water is evaporated till a thick fluid is left. Tobacco is pounded, heated in a tin over the fire, and when slightly cooled is mixed with the *Magarri.*

Snuff and Snuff Boxes.—Snuff Box (*Mtete*) is made from the fig-shaped fruit of the *Msechi* tree, dried and hollowed out and fitted with a wooden plug. Skins of small mammals (skinned in the shape of a bag) are also often used to keep tobacco and snuff in. The Angoni are especially fond of the skin of the *Simba* (spotted cat) for the purpose. *Likongwe, Kakaka*, etc., are also largely used.

Angoni tobacco is torn from the ball with the hands into small pieces. These are pounded between two stones. A little water is added during the process to prevent the dry tobacco powder from blowing away. This powder is mixed with ashes of *masuku* branches, cassava, or banana ribs.

The snuff is generally kept in the skin of a lesser spotted cat called *Simba*, the pelt being drawn off the body from the head in the form of a bag, in the same way as skin water-bags are made in India and other places. This bag is usually worn at the waist.

Tobacco for Chewing.—Swahili and Yao.—A certain kind of small shell, called *Nhhono* in Chinyanja, Ngumbwa and Yao, is reduced to a kind of lime by burning over the cobs of maize or cow-dung. The white powder is then removed, put on the leaves of the banana, and slacked with a little water. Then it is either rolled up in leaves and roasted near a fire, or heated in the bottom of a pot. The tobacco is mixed with this powder and chewed. The powder is called *Swaka* in Swahili, and *Swakarra* in Chiyao.

HISTORY OF TRIBES AS NARRATED BY THEMSELVES.

Ayao.—The Fort Johnson and Liwonde Yao were formerly called Amachinga, and those on the other side of the Lake Amazaninga, while the Blantyre and Zomba people were called Ayawa, and by others Achawa.

The Ayao asked the Mlangeni Angoni to help them against Mponda on the Shiré River. Mponda held out against them both.

Angoni.—The Mpeseni Angoni fought with Jumbe at one time, but neither side seems to have gained anything. They also fought a good deal with Mwasi, but do not appear to have broken his stronghold at Kasungu. They drove Kongonio ut, and the latter fled to Chirobwe. Kalulu's village, the present village on Fort Manning, Kongoni road, was "broken" by Kangwere. The Angoni arrived at *Nkuku Yimodzi* (first cockcrow). They came three times, but did not get in. There was much famine in the village owing to the siege. Mabwera, another fortified village between Bua crossing and Dowa close to the road, was attacked by Mpeseni and Chibwere's Angoni.

Swahili.—Jumbe came from Zanzibar and settled near Kota Kota. He made many slaves, hence the Swahili now at Kota Kota. He is now dead, and so is his son, who was chief after him. He formerly attacked Kabadula's village and took everybody prisoner to Kota Kota. When these were subsequently released by the British they returned to their old village.

Jumbe fought with Mwasi, the Achewa Chief of Kasungu, but was repulsed. This was after the arrival of the Mpeseni Angoni. Fundi, ex-askari, who has founded a small village close to Fort Manning, was a Kota Kota Swahili, but had trekked across from the coast, when he was a young man, with Kiisi, ex-askari and and present belt-mender (flattery to call him a cobbler), and a party of Swahilis. He is now (1904) a man of perhaps forty years or more. He says that when he originally came from his home, Kavinga, three days from Zanzibar on the coast, he was a young man, just too young to carry a man's load. They crossed German East Africa, but this was before it was occupied by the Germans.

History of the Angoni.—In consequence of fighting between Ngcowa (C represents a click like a sound of vexation) and Zongandowa, the latter left with his people and trekked northwards sixty to seventy years ago. Shortly after crossing the Zambezi, his head Induna, Gwasa, left him and struck out more to the east; his son Chikusi founded the settlement of Angoni, now at Mlangeni; Zongandowa proceeded northwards with his people and sons—Mpeseni, Khlova (elephant), Mombera Mkhlashlu—and settled where Mombera's people are now. Then Zongandowa died. Shortly after his death Mpeseni and Chiweri left Mombera. Chiweri and his people settled near Dowa. Mpeseni and his people went right up to the Awemba country and Luapula. They captured much cattle; owing to a plague of locusts, and to being attacked with small-pox, they left the Luapula and came down to Pinduka. They then moved again and settled in the neighbourhood of Fort Jameson.

Mlanyeni was the son of Mpeseni, and fled to Mombera (in consequence of the Mpeseni Expedition), where he is still living. His son Mlanyeni is now the biggest chief of the Angoni in the Protectorate. His wife Mphete, who was left behind when he went to Mombera, is also a chief in this district. She may be anything between fifty and seventy years of age, and has a grandchild about sixteen or seventeen years old. She was born during the trek of the Angoni when they were about the Zambezi.

Mlangeni Angoni.—After the death of Chikusi, his son Gomani was made chief. Kachere (Chikusi's brother) also died; his son Kachinda fought with Gomani, but got beaten. He then left and went to Chitundu, where he unsuccessfully engaged the Ayao under Tambala. He then went to Lake Nyassa, and the Government intervened. Gomani was hanged and Mdala made chief. Mdala was deposed and Mlangeni, widow of Chikusi, was made chieftainess.

The chief tribes in the neighbourhood of Mpeseni Angoni are:—(*a*) Angoni, (*b*) Achewa, (*c*) Achapeta, (*d*) Achikunda, (*e*) Asenga, and more distant (*f*) Akunda. Since the arrival of the Angoni and the consequent wars, the tribes have become rather mixed.

The section of Angoni who settled under Mpeseni have occupied chiefly Asenga and Achapeta country. For instance, Mponda, a Chapeta chief, used to have his village under the west side of Mchenje, and held out in a fortified village against the Angoni for some time, but was finally worsted, so had to run away. When things had quieted he built his village near the Russa, about 15 miles to the east of Mchenje.

Katungwe, another Chapeta chief, used to have his village near where the White Fathers (Kachibire Mission) are now. A tree in the gap between Chilembwi and Kalulu Hills is called Kuvakutira by the Angoni, from Kuvakuta (Bellows), as when attacked, Katungwe, at that place, made the points of his arrows red hot with a native skin bellows before shooting them. He afterwards built his village 25 miles to the east.

When the Angoni began to beat everybody, the Achapeta concentrated in several places: many joined Mwasi, the Achewa chief, at Kasungu, to the north, while others collected near Dowa.

When peace was restored, the Achapeta, who had been with Mwasi, had got mixed with Achewa, and there are many who still do not know whether they were Achewa or Chapeta originally.

The Angoni raided and made slaves in every direction, marrying the women captured, and keeping the men to help them fight.

There are numbers of Asenga, Achewa, Achikunda, and Chapeta among the Angoni who now call themselves Angoni, also a few Atambuka; but the latter are chiefly the slaves of the Mombera section of Angoni to the north. There are also Akunda among the Angoni.

LANGUAGE.

Negroid lips are thick, hence they are not able to speak so clearly as other nations, and slur over the letters "b," "v," "w" "f" especially, making a sort of mumble which might be either. One white man contends that a word should be spelt with a "b," while another says it is a "w." As a matter of fact, it is neither.

MEDICINES.

Medicines may be divided into two classes:

(1) Real medicines, which are often wonderfully efficacious.

(2) Charm medicines: such as putting horns in the way of a man to cause his death, tying a small cube of bango round his neck to cure blindness or bad eyesight; a medicine made of a bundle of sticks slung up over a patch of tobacco in a village which has been left, to prevent it from being stolen.

Snake Bite Antidote.—Made of roots and leaves. A different medicine made for each snake and mixed together. Venom of snake, *ulwilwi.* Poison to drink, *ndura.* Poison for arrow, *chaola.*

MODES OF SUBSISTENCE.

Hunting among Achikunda.—Elephant and buffalo are shot with rifles. The side or frontal head shots are used to kill elephant, and the head or neck shot generally for buffalo. The native names are the following:—Elephant, *mzo'oo.* Tuskless male, *mowi.* Elephant having tusks about 20 lbs., *golonga.* Elephant having tusks about one load, *batwa* (weight about 56 lbs.). Elephant having tusks about two men's load, *pinga;* female elephant and its tusks, *hurakazi* (whatever weight). Buffalo, *nyati.* Bull, *tambwi.* Cow, *nymang' ombe.*

With dogs they chiefly hunt the *klipspringer.* The klipspringer (*mbalali*) generally ascends when frightened, and the dogs drive it to the top of a rock or peak, from which it cannot get away, and it is then shot with arrows.

They also hunt with dogs hartebeest (*nkonze*) and waterbuck (*nyakodzwe*) and smaller antelope, but the dogs are not able to tackle kudu (*nzilowa*), eland (*ntuka*), or the bigger antelopes.

Game-pits (*dindi*) are common in Portuguese territory. A long, narrow, deep trench like a grave is dug where animals are expected to pass, either on a pathway or in a row, and covered over with brushwood, grass and leaves. They do not put pointed stakes in the bottom. A bigger kind are made for elephant and rhino.

A Game Fence (*chinga*) is often put round a field to keep game off at night, with a game-pit and noose in an opening.

The Noose (*matanda*) is fastened to a strong bow firmly fixed in the ground and bent down, and so arranged as to be released when the animal tries to pass. When set for smaller animals, it is arranged to catch the neck; for larger animals, the legs.

Stone Traps.—*Maliwa* (*diwa* in Chinyanja) and falling logs are arranged to catch smaller animals and lesser cats which are valued for their skins, either as ornaments or to keep tobacco and snuff in, being skinned from the head in the form of a bag.

After an elephant has been killed and the tusks cut out, it is the custom for the oldest hunter present to remove the mass of nerves from the interior of the tusk. This he does out of sight, and the rest carefully avoid the place. If a younger hunter were to do this, or see the operation done, he would lose his eyesight, according to the superstition. A favourable omen is sought before setting out hunting. Medicine is taken the night before the proposed expedition, and a dream of a bird flying upwards, or of a person ascending a hill, are accounted favourable whereas a dream of falling, or of people in black clothes, would deter the hunter from starting.

Hunters are tatued on the arm in a special way. On return from a successful hunt, a dance called *Chipalu* is generally held.

Measures.—A *mkono* might be called the unit of linear measure. It is, roughly half a yard. Two *mikono* are called a *lupande*, two *malupande* are called a *mkwamba*, two *mikwamba* are called a *chirundu*, and two *zirundu* are called a *magola*.

Very often *chirundu* is used to denote any piece of cloth bigger than a *mkwamba*, the computation of anything above being too severe a mathematical problem to deal with. A *mkono* is measured when a bargain is struck, by calling any average-sized man and measuring from the tips of his fingers to his elbow-joint. The cloth is then doubled to make a *lupande*, and the *lupande* doubled over till the required number are measured off.

Honey (*Uchi*).—Bees (*njuchi*) are not domesticated, but prepared hives of bark are sometimes hung in the trees to entice them to hive there. The natives are very fond of honey; they devour the honey and the grubs impartially. To take a nest, a wisp of grass is lit and held near the nest for a short time or poked into the hole. It is then dug out with a pointed stick if in the ground, or hacked out of a tree with an axe. The bees do not appear to be stupefied in the least, and fly round, but hardly ever sting.

The honey-bird is no myth, and whenever its twittering is heard the natives always look round carefully. The following are the native names for the bird: in Chinyanja, *Nsadzu*; in Angoni, *Soro*; and in Swahili, *Segu.*

Wooden Pillows are called in Yao, *msamilo*; in Swahili, *mto* or *msamilo*; and in Angoni, *chigoko.*

Washing.—The villager uses *madea* (maize bran) with which to wash things (having no knowledge of soap).

Architecture.—Villages are stockaded to keep out lions, as Gwirisi and other villages near Lilongwe; others have a stockaded court outside each hut, as in Portuguese territory south and south-east of Fort Manning.

Making Fire.—Before the introduction of matches, fire was made by Swahilis by snapping their flint locks till the sparks so produced kindled the grass, threads of cloth, or whatever they had prepared to ignite. Powder was not used for this purpose.

Other tribes make fire in the same way as most uncivilised peoples, by two sticks cut for the purpose. One, long, thin, and pointed, is stood with the point in a notch on the side of the second, which is placed lying on the ground. The vertical stick is then made to revolve rapidly by rubbing between the palms until fire is produced at the point. When a man is alone he has to make it himself, but if several are present it can usually be done in two reliefs. Only especial trees are used for this purpose. A tree called *mpeka* is one tree used for this purpose, also the bamboo.

MUSICAL INSTRUMENTS.

Kaligo (Chinyanja); *gubu* (Angoni).—This instrument is shaped like a bow, with a string made out of prepared sinews from the back of eland or other game. In the middle of the wood is a cup made of a gourd, to make it sound; the string is twanged. There are sometimes some finger-notes arranged at one end to vary the sound.

FIG. 1.—ISCHLIANGA.

The natives, although having nothing which can be called a tune on their musical instruments, can recognise a piece of music again. Some boys, having heard "The Soldiers in the Park" played by the band of the 1st K.A.R. fairly often, recognised the same tune on the gramophone about three months later. They sometimes whistle tunes they have heard the band play.

The Angoni sing in parts when carrying loads.

The Askari of the band do not learn by ear, but by watching the instructor's fingers.

Ischlianga (Angoni).—A section of *mapira* cut off with the knot or joint left at *a*, cut almost round at *b*, but a strip (*c*) left. This is split down a short way so that it can vibrate. Hole cut at *d*. They hum through this hole and vibrate *c* with a piece of grass, which makes a buzzing sound.

Religion and Superstition.

The old religion of the country consists of a belief in spirits and a vague idea of a Supreme Being. Many of the Ayao, however, call themselves Mohammedans, having had more to do with Zanzibar than others. They are really only Mohammedans in that they call themselves such and circumcise their children, and make some pretence at praying on rare occasions. Of the precepts of Islam they know nothing. It does not prevent their drinking beer; they never observe the five times of prayer religiously, and some only pray during Ramadhan. They, of course, get very distorted ideas; one idea is that it is against their religion to remove from their heads in public a white cap of Swahili origin, from the fact that it is considered bad manners among the Arabs to remove the turban except in the house of a man you know very intimately.

It is largely thought that the Koran is written in Swahili.

Dreams

A bird flying upwards	Denote good luck.
Climbing a hill	
Much money	
A lot of people dressed in white	
People dressed in black	Denote bad luck.
Falling	

Boiling Water Ordeal.—As in England in the Middle Ages.

Spirits (*Mzimu*) (plural, *Azimu*).—*Azimu* are the people that come to us in our dreams; they are never seen except in dreams. Authorities differ as to whether they can be heard or not. A noise seemingly without cause is often referred to *Azimu*, such as a squeak or cry which cannot be accounted for. Ghosts are never seen, or *Azimu* out of dreams.

The spirits of father and mother should provide for one's welfare, or, if they are alive, perhaps grandfather or other near relation. They should keep off the bad spirits who want to do harm.

If you meet with trouble, you can put white beans or flour under certain trees and ask your *Azimu* to do better.

God (*Chiuta* or *Mulungu*).—Nothing much is known about him. He is regarded as more or less omnipotent and omniscient, but seems to be a hazy idea of some supreme being and to account for unexplained phenomena, such as thunder, lightning, and small-pox. He does not seem to require prayer, and is hardly ever mentioned.

Witchcraft (*Ufiti*). Wizard or witch (*mfiti*).—An *mfiti* can kill a man by medicine. If he does this he always comes to the grave to eat the body, generally with his fellow *mfiti.* If a man is supposed to have been killed by *ufiti,* a man skilled in medicine to use against a *mfiti* stops by the grave at night after the man is buried. When the *mfiti* comes he sticks a sharpened stick up either its anus or penis. The *mfiti* then runs away and dies in his village. A native who had had this done to him would be afraid to tell, in case it was thought that he was *mfiti,* and so a man is sometimes removed in this way.

MISCELLANEOUS.

The ordinary European will show the height of anything by holding the hand horizontally, palm downwards; the native only does this to denote inanimate objects. The height of a human being is always shown by holding the hand upright, fingers uppermost, and the height of an animal by holding the arm horizontally, with the palm outward.

In the sign of beckoning they reverse the palm, and at first sight it would look like a sign of repulsion. To attract attention (perhaps when shooting or when they don't want to talk) they make a click, click, click with the tongue and teeth, like many women do to denote vexation.

The native day is the reverse of the astronomical day, *usiku wa lelo* (the night of to-day), is what we call "last night." The night has the prior place in their mind apparently.

A journey is not reckoned by how many days' trek is performed, but by how many nights are slept on the road. Time and distance are both very hazy ideas in the native mind, as they are both so immaterial to him. There is no reason for hurry in his ordinary life, nor any reason for getting to a place in a given time. An askari going on leave for a certain number of days generally keeps count by notching a stick every night.

Knowledge of Stars.—Only a very few stars are known; their names are here given.

Milky Way.—In Yao *lichinga usiku* (the game fence of the night).

Pleiades.—Yao, *irimira* or *ilimila*; Achikunda, *nsangwe.*

Stars.—Chinyanja, *nyenyezi*; Chiyao, *ntondwa.*

The Moon.—*Mwezi.* New Moon.—*Lero wambalame mawa uoneka* (to-day it is for the birds (the birds see it); to-morrow it will be visible).

Birds are supposed to have keener sight than man.

Mawa nyanga uoneka chifukwa lero wazimu.—To-morrow the moon will be visible, for to-day it is a spirit.

Moon in Angoni is *Nyanga.*

Albinism occurs occasionally. Albinos are said (by the natives) to have reddish skin, and to suffer much from the sun. The hair is white but woolly, and the eyes delicate.

Madness (*masoka*).—Natives are afflicted with a kind of madness which causes them to rush into the bush and wander about. They sleep out in the bush, and, when hungry, come into a village and take what they want, but are not able to recognise their own village from any other. People are usually very good to them and put out food for them. They, however, prefer uncooked food, and will generally take maize or cassava from the fields. If they are offered cooked food they will generally throw it back in the face of the person who gives it. The natives have certain medicines they give for madness, which are said to cure it.

A man who had been mad was questioned about it. He said he could remember first running out into the bush, and nothing since, till he had an idea that he felt better. Other natives said that he had been found in the bush by some men, who brought him back and gave him medicine, and after a short time he was cured.

ON THE ETHNOLOGY OF THE SOUTH-WESTERN CONGO FREE STATE.

By E. Torday and T. A. Joyce, M.A.

[With Plates XVII-XX.]

The following tentative sketch of the population of the South-Western Congo Free State, the order in which the peoples have arrived in their present positions, and the causes which have underlain the tribal movements, is based on a two years' survey of the district, the extent of which is exhibited on the accompanying map. It forms the conclusion of the series of ethnographical papers published by the same authors in various issues of the *Journal*[1] and *Man*,[2] though many points of interest in connection with the collections made during this period still await publication. Although mainly ethnological, it contains a certain amount of purely ethnographical matter, chiefly in connection with the Ba-Yanzi, which hardly sufficed to form a paper by itself. The paper has no pretensions to conclusiveness, since much remains to be done in this most interesting district. At the same time the amount of information collected seems to be a sufficient basis for a few general theories, which, at best, must be regarded as working hypotheses.

The tract of country of which the inhabitants are under consideration may be roughly defined as that between the Kasai on the north, and 7° S., and again between the Loange in the east, and the Kwango on the west. The country slopes from the south to the north, and is drained by the following main rivers; starting in the east, the Lubue, the Luela, the Kancha, the Kwilu, the Wamba and the Kwango; the Kwilu basin, which has been the centre of observation, is mainly grass-land, the banks of the rivers alone being forested. The banks of the Kwilu itself appear to be the most fruitful portion of the whole region, and the history of the population consists, in a great measure, in a struggle for the possession of this, the most fertile, territory.

The following tribes come under consideration, Ba-Samba, Ba-Songo, Wa-Ngongo, Ba-Bunda, Ba-Yaka, Ba-Yanzi, Ba-Pindi, Ba-Mbala, Ba-Huana, Ba-Lua, Ba-Kwese, and Ba-Djok^{e} (Kioko). The position and extent of each of these can be seen on the map, and are further defined at the beginning of the section of text allotted to each.

Their culture appears to be purely "West African" in type, the sole incongruous elements being formed by the coiled basketry of the Ba-Kwese (Pl. XVIII, B. Fig. 2), the swords of the Ba-Bunda (Pl. XVII, B. Fig. 5), and the spears of the Wa-Ngongo.

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[1] TJ.[1], TJ.[2], TJ.[3].

[2] T., TJ.[4].

Cannibalism is practised by the following:—Ba-Yanzi, Ba-Huana, Northern Ba-Mbala, Ba-Pindi, and one tribe of the Ba-Kwese, also the Ba-Samba, Ba-Songo, Wa-Ngongo and Ba-Bunda where they are in contact with any of the above. It is interesting to notice that, generally speaking, those tribes inhabiting the districts where food, both animal and vegetable, is most abundant are most addicted to this practice. This fact seems to prove that, for this region of Africa, cannibalism cannot be attributed to a scarcity of provisions.

During the time that this information was being collected, the country was visited by a German scientist, Dr. Frobenius. The authors regret that the information collected by him has not yet been published, since it must necessarily be of great value in any discussion of this region. At the same time there is an advantage in publishing an entirely independent survey. There are a few points in the preliminary observations published by Dr. Frobenius with which the authors cannot quite agree, and it may be as well to refer to them here.

In the *Zeitschrift f. Ethnologie*, 1905, p. 468, he claims to have identified the Ba-Jeje of Kund with certain Ba-Jaja or Ba-Ja; this name is not a tribal appellation at all, but simply a term expressing the inhabitants of the village Baia.

On p. 469, he states, "Die Zusammengehörigkeit der erst-gennanten Stämme (Bajaka, Bassamba, Bapindi und Bamballa) bezeichnete ich als Granitbildung. Das ist so zu verstehen: sie sind regellos über das ganze Gebiet verteilt. Auf dem Marsche in irgend eine Richtung mag man erst ein Dorf der Bamballa, dann zwei der Bapindi, dann eines der Bassamba, wieder eines der Bamballa, drei der Bajakka, u.s.w. berühren."

Though this is true of the part of the country through which he made his "Zweitagemarsche"[1] (*i.e.*, behind Michakila), it gives a false idea of the conditions prevailing over the rest of the region as the map accompanying this paper will show. The fact was that the learned traveller passed through just that district where these tribes meet, and a certain amount of overlapping has necessarily taken place. The statement which immediately follows: "Die zweite Eigenart ist dass sie alle auf genau den gleichen Kulturerscheiningen leben. Die Stämme sind abgesehen von der Sprache heute genau einer Art," can only be taken in the very widest sense as signifying that they all belong to the "West African" form of culture. Of course, in such a region as the neighbourhood of Michakila, the villages have acquired a certain false homogeneity owing to constant intercourse and interchange of customs, but this is certainly not the case in the large tracts which compose the rest of the Kwilu region.

The statement on the same page that the Ba-Huangana (a local name for Ba-Huana) have reached their present position from the south we cannot accept for the reasons given in the section relating to that people.

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[1] *Zeit. f. Eth.*, 1905, p. 767.

Again, in the *Zeitschrift* for 1906, pp. 737–738, Dr. Frobenius speaks of certain tribes (Bansadi, Badinga, Banguli and Bankutu) as " Baschensi und Halbbaschensi." As is well-known throughout the Free State the term *Ba-Shensi* means merely "aborigines." No doubt the author was aware of this, particularly as the fact is mentioned (though of East Africa) by his learned colleague, Dr. Ankermann, in his exceedingly valuable paper in the *Archiv. für Anthropologie,* 1906, p. 252. But it is just possible that he may have been misled by his interpreters, who were strangers to the neighbourhood, and therefore may have applied this rather depreciative term to the natives, regarding them as an uncultured folk because they had not yet advanced to the " dignity " of being in the service of a European. Also in the same journal for 1907, on p. 315, he states of the " Kwangovölker " and the "Stämme am unteren Kassai," "Vor allen Dingen ist die Sprache noch heute das alte Kikongo." It is true that some of the natives, especially among those on the river banks, speak the trade Chikongo, but the local dialects, spoken by the population at large, do not resemble Chikongo more than Chikongo itself resembles Kiswahili.

It is interesting to note that Dr. Frobenius follows Dr. Ravenstein[1] in identifying the "Anziken" (Anzicana, Anzichi, Anziques) with the Ba-Teke of Stanley Pool.

BA-SAMBA, BA-SONGO AND WA-NGONGO.

These peoples live in small enclaves distributed amongst the peoples already mentioned. The most important are: Wa-Ngongo, on the Luzubi and on the Gobari; Ba-Songo, on the Kwilu to the north of Kongo, and to the north of the Luchima; Ba-Samba, on the Gufu. These peoples, owing to the small size of their settlements, speak the language of the tribe surrounding them; but they each speak a language of their own which is not understood by the rest. So little is known of them that it is impossible to discuss their affinities, but it is possible that they may be the remains of an aboriginal population. They are extremely reticent as regards any information concerning themselves, and though, when friendly relations are established, they will chat freely on any other subject, yet if any question is asked regarding their origin or habits they immediately refuse to understand.

The northern Ba-Mbala found the Ba-Songo in possession of the country when they arrived, and purchased land from them and the Ba-Yanzi.

The Wa-Ngongo are particularly interesting as the only tribe amongst whom spears are found; these are of the socketed variety; they also use pan-pipes.

All have adopted the hair-dress, clothes and houses of the surrounding population.

BA-BUNDA.

The Ba-Bunda extend, roughly, from 5° to 5·30° S., and from 19° to 20° E. According to the northern Ba-Mbala they were in the country before the Ba-Yanzi.

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[1] AB. pp. 91 (note) and 192.

Physically they are of much heavier build than the rest of the peoples described in this paper, they are large-boned and very dark in colour. Frobenius says that they are fairer than the rest, but those, amounting to many hundreds, seen by one of the authors at Kikwit, whither they had come to fetch loads for the Kancha River, were certainly extremely dark. The same author says that they extend nearly as far as the Kwango, but it is certain that none are found established west of the Kwilu. The mistake may have arisen from the fact that the Bakwa-Mosinga tribe of Bakwese are ruled by a chief of Ba-Bunda blood, Yongo.

It is interesting to note that swords are in general use among the Ba-Bunda; the peculiar "counter-changed ogee" pattern of blade is, we believe, unique. (Pl. XVII, B, Fig. 5.)

BA-YAKA.[1]

The Ba-Yaka extend from the Kwango, south of 4·30°, where they are found on the left bank also, roughly speaking to the Ba-Mbala. They have been settled on the Kwango for centuries, since they are mentioned by some of the earliest travellers. Here they are ruled by one great chief known as the Kiamfu, whose power, at the beginning of this year, has been overthrown by the Congo authorities, the Kiamfu himself being now in prison at Leopoldville. It has been stated that in former times this state was subject to the Muata Yamvo, ruler of Lunda, and it seems quite possible that the chieftainship was seized by one of the emigrant raiding chiefs of Lunda (see Carvalho[2] *passim*), who have formed so powerful a factor in the history of this region of Africa. It may be, indeed, that the title "Kiamfu" is derived from "Yamvo."[3]

It is, however, very doubtful whether the Ba-Yaka were actually tributary to the state of Lunda; and, even if the first chief of Lunda origin did send a nominal tribute to the Muata Yamfo, it is very improbable that it was long maintained.

The eastern portion of the Ba-Yaka seem to be emigrants who have rebelled against the Kiamfu, and are ruled by a chief named Muri Kongo, and it is to this eastern section that the notes already published relate. It may be mentioned in passing that the title "Muri" applied to Kongo seems in this case to be merely honorific.

The strip of Ba-Yaka extending in a north-easterly direction from the upper waters of the Gufu or Kafi, as well as the enclave on the right bank of the Kwilu, appear to be the result of a later migration of the subjects of Muri Kongo towards the east.

Physically, psychologically and culturally, the Eastern Ba-Yaka show a close resemblance to the Southern Ba-Mbala. The languages of the two peoples also display important points of resemblance.

[1] See also T.J.[2]

[2] C. This admirable work is by far the best of those dealing with the history and ethnography of the tribes connected with the Lunda Empire.

[3] vM. mentions the term *Kiamvo* as a title of the ruler of the "Mayakalla," but appears to confuse it with *Muata Yamvo.*

BA-YANZI

The Ba-Yanzi, with which this paper deals, including their sub-tribes the Wa-Nguli and Makua, extend on the east bank of the Kwilu from its mouth to 4·30° S., occupying the territory eastward as far as the Kancha and Kasai. South of the 4th degree they are separated from the Kwilu bank by Ba-Huana and Ba-Mbala territory. On the western bank they are found from 4° to 4·30° S. An isolated settlement exists on the eastern bank north of 5°. It is possible that the Ba-Konde[1] on the left bank of the Kwilu, and, if Frobenius is right, the Ba-Dinga between the Luela and the Kancha, are also Ba-Yanzi.

Their original home appears to be in the north, since their manner of preparing manioc is typical of the Congo where the parent stock is found. There is a statement found in the works of many writers that the Ba-Yanzi are Ba-Bangi, who have been drawn down the Congo by trade to Stanley Pool, and that the term Ba-Yanzi is an uncomplimentary nickname given them by the surrounding peoples. It is difficult to fix the responsibility for this statement, or to discover the grounds on which it was first made, but it may safely be said that the Ba-Yanzi of this neighbourhood do not regard the name as a nickname, nor do they call themselves by any other. As far as could be discovered they have no tradition concerning their arrival in the country, which they seem to have occupied more by peaceful settlement than by force of arms. Certainly they seem to have been in possession of it for a considerable time. The northern section of the Ba-Mbala admittedly purchased the territory they now occupy from them and the Ba-Songo; and, even if this tradition did not exist, the subsequent arrival of the Ba-Mbala would be apparent from the fact that they regard the Ba-Yanzi chiefs as suzerains. The northern Ba-Huana, too, pay the latter tribute. In fact, apart from the Ba-Songo, Wa-Ngongo and Ba-Samba, the Ba-Yanzi, with the Ba-Yaka and Ba-Bunda, may be regarded as the tribes longest settled in the stretch of country under consideration.

Physically the best specimens of the people are found in the up-country, the worst on the river banks.

The hair of the men is dressed in a bunch at the back of the head, that of the women is usually parted in the middle and made up into two plaits which hang down behind the ears, less frequently the head is shaved, with the exception of three longitudinal ridges of hair, or is dressed in the same fashion as that of the Ba-Huana. The last is true of those Ba-Yanzi inhabiting the banks of the Kwilu. Head-coverings are only worn in mourning. On the river no paint is used; inland they employ a red pigment extracted from the seed-capsule of the *Bixa Orellana*, with which they ornament themselves on festal occasions. In mourning the face is smeared with soot. The men do not ornament themselves with scars, but women are decorated in this fashion on the abdomen. Clothing consists of palm-cloth worn round the loins; on the banks this cloth is plain, but in the interior, behind Luano, it is ornamented with diaper patterns; women wear, attached to their girdles, a number of small receptacles made from the necks of gourds. Bracelets of iron and copper are worn on the arms and legs. The clothes of the dead are buried with them.

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[1] The Ba-Konde appear to display certain affinities with the Ba-Huana also.

The Ba-Yanzi will eat practically anything. Manioc flour is prepared in the following ways:—

1. A pot of water is placed on the fire and a handful of flour is thrown into it; when it boils, it is stirred, and more flour is added little by little until it forms a compact pudding; it is then formed into a ball, placed on a leaf and is ready for eating; it is both palatable and nutritious.
2. The flour is mixed with water until it forms a stiff dough; this is made up into portions in the shape of sausages, the length and diameter varying according to locality; it is then wrapped in banana-leaves and boiled; so prepared it is sourish and not palatable as far as Europeans are concerned.

In both cases the flour is prepared as follows:—the manioc is soaked in water for three days, and then peeled and dried in the sun; after this it is pounded in wooden mortars. The Ba-Yanzi will eat the flesh of all animals (except a certain fish which is considered unwholesome), even in an advanced stage of decomposition. Fish and meat are smoked and exported. Palm-oil is used in cooking, except in the case of smoked meat, which is eaten uncooked. They are not cleanly in the preparation of their food.[1] They are cannibals, but do not eat relations or the flesh of individuals who have died natural deaths. In the case of a murder it was found by enquiry that every male in the village, except the chief and his children, who were debarred by his office from eating human flesh, had shared in the banquet on the remains; the children were given the bones to gnaw. They are not ashamed of cannibalism. Tobacco is used chiefly for smoking, though snuffing is also practised. The tobacco grown near Luano is famous throughout the country.

In the interior they are hunters, though they do not know how to make spear-traps for elephants and hippos. These are made for them by Ba-Mbala who are allowed a share of the meat. Pitfalls and nets are used, the latter being large and of good quality; snares are set in the plantations of ground-nuts for partridges and guinea-fowl. On the river they are great fishermen. Fowls, goats and dogs are kept as domestic animals.

They are good agriculturists, their manioc plantations are easily recognisable because they do not clear away the grass; ground-nuts, Kasai-peas (*voandzeia*), all kinds of bananas and plantains and much tobacco, are cultivated.

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[1] "My followers, mainly Ba-Mbala and Ba-Huana, frequently refused food offered them by Ba-Yanzi on this account."

Three types of hut are found amongst them:—

1. Rectangular, with ridged roof and two compartments, about 1·50m. high and 4m. long, built of grass; the threshold of the door rises 30cm. from the ground.
2. Semi-cylindrical, with a verandah supported on pillars, similarly divided in two compartments, about 2m. high.
3. The same pattern as 2, but without a verandah, and 4·50m. high. The last type was found in the village of Kibwata, east of the Kwilu, and the houses were arranged in a circle, each separated from the next by a space of about 1m. This was the only place in which this type was found.

In Chitutu's village, Ganga, the huts were of the first type, except that of the chief, which was of the second type, though as large as the huts at Kibwata. With the above exception the huts were built without any systematic arrangement. Each wife has her own hut.

They make good basketwork and pottery; iron is smelted and worked; the Wa-Nguli, in particular, are good smiths, and their weapons, tools, etc., are particularly well made. They are great traders, exporting food, tobacco and ivory; the currency used is formed by *Djimbu*,[1] brass rods and salt. The first, being of southern origin, are not common, and, consequently, have a value about four times as great as on the Lukula. Brass rods, on the contrary, have a very low value.

As far as could be observed inheritance was from father to son; where there were no sons the brother was the heir.

The Ba-Yanzi are governed by a number of great chiefs, each of whom rules over a number of petty chiefs; no tribute is paid by the latter to the former, and the organisation seems only to exist for the purposes of war; a free man will often leave his village and set up as a petty chief on his own account; he regards the chief of the village he left as his suzerain. At the same time the great chiefs of the Ba-Yanzi exact tribute from foreign tribes who have settled in their country; this tribute consists of the heads of all game slain and all people killed in war. For instance, generally speaking, all the Northern Ba-Mbala, except those in the extreme west, pay this tribute to Ba-Yanzi chiefs, and many of the Northern Ba-Huana also; in consequence, all ivory found in these villages can be traced as having been purchased from a Ba-Yanzi chief.

The great chiefs are assisted by a council consisting of all the fighting men, though only the petty chiefs speak in deliberations.

The great chief usually has a confidential adviser, who, in all cases observed, was a slave; such slaves have great influence, and receive numerous presents from their masters; they often impersonate the chief before strangers, while their master keeps in the background. The chief is, as a rule, the head fetish-man.

The slaves are mainly Ba-Yanzi, and their status is hereditary; they are very well treated. Some chiefs breed slaves, and a male slave who is considered a father of good children receives many wives from his chief. Great chiefs live in a separate village of their own, inhabited only by themselves, their wives and their slaves. Polygyny is the rule; the unmarried are free to indulge. In the case of adultery, theoretically, the man may be killed, but in practice he pays a heavy compensation. Blood revenge is known; if a Mo-Yanzi is killed his village at once rises and attacks that of the murderer; hostilities do not cease until a slave belonging to the latter village is handed over to be eaten.

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[1] The small shell *Olivella nana.*

The name of a married woman may not be pronounced by any man except her husband or brother; she must be addressed as "wife of so-and-so." Neglect of the rule is a great insult and would be regarded as an excuse for manslaughter; it is punishable, at the least, by a heavy fine.

In war, on the road leading to the village, about 200 metres from the entrance, a small hillock, about 30cm. high, is erected, with three arrows stuck into it. This is a sign that entrance is prohibited.

The road leading to the village is defended as follows:—Sticks, about 1m. long are pointed and the ends hardened in the fire, these are fixed in the ground in the high grass bordering the tract, the pointed ends pointing diagonally towards the path and away from the village, so that anyone approaching and leaving the tract runs against them. At various distances, from 5 to 20m. are traps, each consisting of a hole about 1m. deep and 40cm. in diameter, at the bottom of which are several stakes with hardened points; they are covered with grass and earth, and distributed unequally on the path and in the grass on either side of it. Near the village is an especially elaborate trap; in the centre of the road is a pitfall similar to those just described, with similar armature, but with the covering half removed, so that it is plain to the passer-by, but at each side, a step further on, is another trap carefully concealed. In the village itself, especially behind houses where people might hide, similar pits are prepared.

The most frequent disease is an affection of the skin which attacks the entire body; whole villages are affected by it; wounds heal with difficulty, owing, probably, to the bad food the Ba-Yanzi eat.

The graves are not surmounted by any mound, and are only recognisable by the broken pots which are placed on them. The whole village mourns the death of one of its members. At a funeral, ivory side-blown horns are sounded; these are of great age and cannot be purchased at any price.

Among the Ba-Yanzi of the river bank, especially in the neighbourhood of Kongo, belief in *Moloki*, as the cause of sickness and death, is found, and the person accused of possession is killed and eaten; this belief, which is not found amongst the tribes of the interior, has evidently been adopted from the Ba-Mbala.

Certain fetishes seem to be of a phallic nature and are propitiated, and petitions, especially relating to the fertility of women, are made to them. There are three principal fetishes involved; these were seen at Ganga, and belonged to the chief Chitutu, who is considered the greatest magician in the country.

1. Chitutu himself said this was the male, *Mulüme* (Fig. 1). It consisted of a coiled basket, in which were set four phalli, made of clay moulded on wooden cores; to the bases of each of these, on one side, were attached feathers, which he said represented the pubic hair. These were painted white with two transverse bands of red. The extremities were yellow from spitting with kola.

2. This was said to be female (Fig. 2); it consisted of a pottery vessel, globular in shape, with a circular mouth and a straw handle; it was ornamented with red, a white transverse line, and white spots. To this was bound on one side a sausage-like object of clay moulded on a wooden core, painted red. On the other was fastened an iron bell. Inside were offerings, such as *jimbu*, brass rods, pieces of iron, etc.

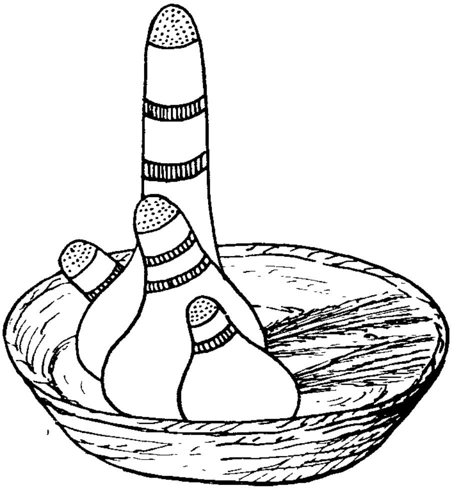

FIG. 1.

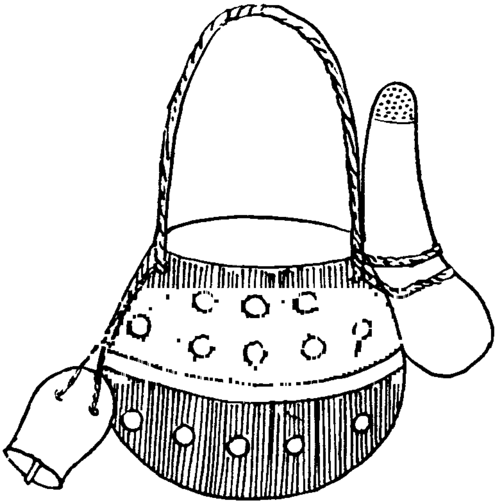

FIG. 2.

3. An object, also of wood on a clay core, triangular in outline, with a conical projection on one side; along one edge was a fringe of feathers supposed to represent hair. This was said to be female, and probably represented a vulva.

Besides these are a number of wooden objects; these were said to represent children.

The ceremony is as follows:—All the fetishes are spread out on a piece of cloth; the chief with two of his sons or slaves sits down opposite them. A cock is brought, and the chief cuts an artery at the side of the bird's neck and lets the blood trickle out through the mouth over the three first fetishes, scattering a few drops over the others. Then he chews kola, and, meanwhile, addresses the fetishes, alternately coaxing and threatening them, and making his petition, which is usually a request for fertility for his wives and slaves. After each sentence he spits on the three principal fetishes, and his sons or slaves spit on the others.

BA-PINDI.

The Ba-Pindi are found in two distinct settlements on the Kwilu. The main body are on the right bank of the Kwilu between 5·30° and 6·30°; a smaller colony is found on the left bank of the Kwengo, between the Ba-Mbala and the Ba-Yaka, and there is an offshoot of this section on the right bank of the Kwilu near Kikwit. As far as is known, the main section extends eastwards as far as the Kasai, where Wissmann[1] found them settled in territory belonging to Mai Munene, to whom they were paying tribute.

Very little is known about their ethnography, except their skill in carving and weaving. More, however, is known concerning their history than that of the other tribes with which this paper deals.

It appears that they were originally inhabitants of the Upper Kwango, where they were attacked about the year 1620 by the Lunda chief, Kinguri, and his band of roving marauders.[2] Some of them mixed with the invaders to form the basis of the Imbangala people,[3] while the rest, a large proportion, were driven into the interior, penetrating eventually as far as the upper waters of the Kasai, where they settled. But they were not left in peace, for a Lunda chief, Mukelenge Mutombo, who had come from the court of Ilunga with the original Mai, attacked them and seized part of their territory. However, he treated them well, so they remained. Perhaps the tribute which, according to Wissmann, some of them paid to Mai, had its origin in this conquest. Thus they are related to the Ba-Kwese, though the relationship is not recognised by either people; nor is this surprising, since the Ba-Kwese only contain a small element of Ba-Pindi blood which they have derived from those who acquiesced in the rule of the Lunda invaders. The two languages, however, display considerable similarity.

The two sections of Ba-Pindi, mentioned above, differ considerably in character; the second are on the whole lazy, while the first are amongst the most industrious people of this region; moreover, the culture of the former has been influenced considerably by contact with the Ba-Mbala and Ba-Yaka. Of the latter, those to the north are peaceful; those to the south are extremely warlike, in consequence of their continual struggles with the Ba-Djok^e. This southern portion have opposed all penetration on the Loange southwards, not because they are hostile to Europeans, but because they wish to prevent them from coming into contact with the Ba-Djok^e, fearing lest they might supply their hereditary foes with more arms and ammunition. These Ba-Djok^e formerly occupied their country up to 6° south latitude, and even, according to Arnot, sent expeditions as far north as the Bashi-Lange. They proved a great scourge to the Ba-Pindi, harried their country and carried off many of them as slaves to Portuguese territory. Some twelve years ago, however, the Ba-Kwese, with whom the Ba-Pindi had also been at war, recrossed the Kwilu, and the Ba-Pindi, freed from the presence of the latter, were able to turn their full strength against the Ba-Djok^{e}, with the result that they drove them down to 7°.

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[1] W.^{2} p. 61.

[2] S., p. 79, W.^{1} (who alone dates this event about 1800), W.^{2} p. 61, F.

[3] W.^{1}, W.^{2}, p. 20, F. *Imbangola* appears to be the original and correct form of the name of the people now usually called Bangala; it occurs as early as Purchas, AB., p. 84. "Called Iagges by the Portugals, by themselves, Imbangolas." The Ba-Kwese always pronounce it thus.

In these operations they laid waste a strip of land between 6·30 and 7°, which is still actually uninhabited (though traces of destroyed villages are yet to be found there), and which serves as a "march" between the Ba-Pindi and Ba-Djok^{e} territory. This artificial desert extends from the Kwengo to the Loange.[1] According to information collected amongst the Ba-Kwese, the Ba-Pindi and Ba-Bunda were in occupation of the right bank of the Kwilu when they arrived there.

All Ba-Pindi are cannibals, and buy many slaves from the Tu-Kongo for eating; they are despised by the Ba-Kwese and Ba-Mbala, who say that they are liars and thieves.

An interesting question is raised by the fact that the Ba-Pindi in the neighbourhood of the mouth of the Kwengo alone weave pile cloth, somewhat similar in type to velvet. This is of very good quality, and the patterns are extremely handsome (Pl. XVIII, A. Figs. 1 and 2); it is not quite as good as that of the Ba-Kuba, from which it differs in character. The neighbouring tribes make no cloth of this description, so it is an open question whether the Ba-Pindi of this neighbourhood may not have invented the process.

BA-MBALA.[2]

The Ba-Mbala fall into two distinct groups; the southern portion, who appear to be the parent stem, occupy the territory between the Kwilu and Kwengo, from the mouth of the latter as far south as a line drawn through the sources of the Luano. They are also found between the Djari and the Kwengo as far south as a line drawn through Kisamba, with the exception of a small region occupied by an immigrant settlement of Bakwese on the left bank of the Djari, near its mouth. The west bank of the Kwengo is also inhabited by them, but they do not appear to extend into the interior.

The northern section is found on each side of the Kwilu, but is cut in half by the Ba-Yanzi, Ba-Songo, Ba-Huana and Ba-Pindi, who occupy the banks of the river; they may be said to extend, roughly, from 18° east latitude to the Kancha-Kwilu watershed; their limit in the north is 4°, in the south 5·30° on the left bank, and 5° on the right. The cultural differences between the two have already been fully described. They have certainly advanced to this position from the south; the native tradition is that they have been driven from their home on the sources of the Kwengo by the "Mulua," who are undoubtedly the Ba-Lua found further south.[3] This tradition is current among all sections of the Ba-Mbala; the Ba-Mbala, of Kolokoto, gave the additional information that when the movement started a section of their people took a more easterly route. The northern section found the country occupied by the Ba-Songo and Ba-Yanzi, from whom they purchased territory, a statement fully borne out by the fact that practically all Ba-Mbala in the north recognise the Ba-Yanzi as suzerains and pay a certain tribute to their chiefs.

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[1] Mr. Hohmann, of the Kasai Company, has attempted, but without success, to cross this territory, both up the Kwengo and up the Loange.

[2] See also TJ.[1], TJ.[2], and TJ.[4].

[3] See note 1 on p. 145.

Further proof that these people have come from the south is furnished by the fact that the northern section, though for the most part they have abandoned the distinctive method of dressing the hair characteristic of the southern, still carve many of their fetishes with the old form of coiffure. The question of the adoption of cannibalism by those in the north has already been treated in *Man*, 1907, 52.

BA-HUANA.[1]

The Ba-Huana occupy two distinct districts; the territory between the Kwilu and the Inzia, from the mouth of the latter to 4°, and the right bank of the Kwilu from the Luzubi almost as far as Kikwit; near Mitchakila the latter are separated from the river by settlements of Ba-Yanzi and Ba-Yaka. There is also a small enclave of Ba-Huana to the west of the Kwilu about 5·10° S. and 18·35° E. The division of this people into Ba-Huana and Ba-Honi, mentioned in a previous paper,[1] does not coincide with their territorial distribution.

According to their traditions this people are from the north; they say that they are descendants of the Ba-Teke, and that they emigrated in the time of a chief named Makoko, against whom they rebelled.

The question of the relationship between the Ba-Teke and Ba-Huana has already been treated in TJ.[3], and it was shown there that the culture of the two peoples affords considerable differences; yet this in itself is not an insuperable objection in Africa where the culture of a people seems so largely dependant on their environment. From comparing the Ba-Huana vocabulary collected with the Kiteke vocabulary published by Dr. Sims, it appears that the two languages show considerable similarity, though much of the speech of the former people seems to have been borrowed from their neighbours. Beside the weighty evidence afforded by tradition, the following point is strongly in favour of a northern origin for them. The northern section are ruled by one great chief, whose residence is near the Inzia, and whose influence gradually diminishes towards the south; in fact, his authority is unrecognised beyond Chimbane, and beyond Madibi his very existence is practically unknown. The southern Ba-Huana, in fact, have no great chief, but are ruled by a number of independent petty chiefs. It seems more probable that the petty chiefs should be off-shoots from the main stock in the north, than that they should form the parent stem and the great chief the branch, especially as the northern section are completely settled, while those in the south are still fighting with the Ba-Yanzi, Ba-Pindi and Southern Ba-Mbala; moreover, the last-named consider them intruders in the country. It seems advisable to lay stress upon this point, in so far as another observer has stated that in his opinion the original home of the Ba-Huana is in the south.

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[1] See also TJ.[3].

BA-LUA.

The Ba-Lua are found between the Kwilu and Kwengo, to the south of the Ba-Mbala and Ba-Kwese, as far south as 6·40° approximately.

They state that they are related to the Ba-Lunda,[1] of whom they are an offshoot. As they had refused to recognise the authority of the Muata Yamvo they consider themselves distinct. The Ba-Kwese, however, regard them as Ba-Lunda. The history of this people, as far as it is known, has been given with that of the Ba-Mbala, whom they have driven north from the upper waters of the Kwengo. As they show a bitter hatred for the Ba-Djok^{e}, it is possible that their revolt against the Muata Yamvo may be connected with the troubles caused by the admission of the latter people into Lunda territory by Noeji, the Muata Yamvo who received Graça in 1847.[2]

That their present northward extension is of recent date, is shown by the fact that the Ba-Lua of Muri Kikamba and Bondo, in fact all the most northerly of the Ba-Lua, pay tribute to Muri Kongo, chief of the Bagwa-Ndala tribe of Ba-Kwese.

BA-KWESE.

The Ba-Kwese on the Upper Kwilu are divided into three tribes, the Bagwa-Ndala, Bakwa-Mosinga, and Bakwa-Samba. According to native traditions they are comparatively recent arrivals in the country, and have come from the Upper Kwango, where the Imbangala and Ba-Achinji,[3] with whom they claim relationship, are still settled. This relationship is regarded as so close that the Ba-Kwese say their nation is divided into five tribes, Bagwa-Ndala, Bakwa-Mosinga, Bakwa-Samba, Imbangala, and Ba-Achinji. The Imbangala make frequent trading expeditions to Ba-Kwese territory, where they are received as brothers. The date at which the Ba-Kwese left the Upper Kwango may be approximately fixed by the following piece of information obtained from Muri Kongo, the great chief of the Bagwa-Ndala, who states that his father's father was among the band who left their old home. As Muri Kongo is a very old man, it is likely that the circumstances which gave rise to the Ba-Kwese migration may be connected with the troubles between the Portuguese and Bumba the Great, chief of the Imbangala, who was twice forced to cross the Kwango and disappear into the interior.[1] During their migration they were, of course, unable to cultivate manioc, which requires several years to give an adequate return, and this explains the native saying that they have learnt its cultivation recently from their neighbours.

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[1] There seems little doubt that they actually are Ba-Lunda; the Ba-Mbala call them Mulua or Milua, which is one of the earliest names given to the subjects of Muata Yamvo (see TB., p. 14, "The capital of Moolooa," p. 16, "The Moolooas," and also p. 18). In MB.^{1}, moreover, we are told that "Milua" is the Kioko name for the Ba-Lunda.

[2] C., p. 554.

[3] A most interesting piece of evidence showing the close relationship between the Imbangala and Ba-Achinji, in fact, their original identity, is given by C., p. 98. Here it is stated that the nickname "Xinjes" was given to the Imbangala by the surrounding peoples, owing to the fact that they eat rats. It is also interesting to note that the word *Shinj*^{e} among the Ba-Mbala means a species of rat. A parallel instance of a nickname given to a people from some peculiarity in their diet, is afforded by the Ba-Huana, who are called *Ko'o*, *i.e.*, frogs, by the Ba-Mbala, because this animal is eaten by Ba-Huana women, whereas the Ba-Mbala abstain from them altogether (T.J.^{4}, p. 279).

Upon their arrival the Ba-Kwese distributed themselves as follows:—The Bagwa-Ndala occupied the country between the Jari and the Kwilu. The Bakwa-Mosinga and Bakwa-Samba crossed the latter river, drove off the Ba-Pindi and Ba-Bunda whom they found there, and settled upon the further shore. But they were not allowed to retain possession undisturbed, and there followed a troublous time, during which, not only were they continually fighting with the Ba-Pindi and Ba-Bunda, but they were also engaged in repelling the raids of the Ba-Djok^e in the south.

After one of the numerous wars the Ba-Bunda were obliged to pay an indemnity to the Bakwa-Mosinga, which was partly composed of slaves. Among these slaves was a boy named Yongo, who adopted the cause of his new country, and took part in the wars against the Ba-Djok^e. His bravery won him distinction, so his master gave him his freedom by presenting him with a bracelet. Shortly afterwards he married the daughter of a chief, and his influence became such that when the chief died he not only usurped the chieftainship, but gradually reduced all the other chiefs to a condition of vassalage, except Momambulu, the head-chief of the Bakwa-Samba. At last, tired of supporting a continual struggle against three tribes, the Ba-Kwese of the right bank of the Kwilu decided to emigrate, and the leadership fell naturally to Yongo, Momambulu following his guidance. They recrossed the Kwilu, drove off the Bagwa-Ndala not under the direct rule of Muri-Kongo, and settled in their present home. This settlement was not effected without several severe battles, in which the victory naturally fell to the immigrants, who had been for some time well versed in warfare, while the Bagwa-Ndala had, during the same period, been living the life of peaceful agriculturists. The section of Bagwa-Ndala who were thus driven out went towards the north-west into the barren plains they now occupy, where they live under considerable difficulties owing to the sterility of the country. This movement of the eastern Ba-Kwese occurred about 12–15 years ago. Yongo divided the country into several provinces, placing one of his brothers-in-law at the head of each. Part of the newly-acquired country was given to Momambulu also, but it seems that Yongo regretted his generosity, because, at the end of 1906, he attacked the Bakwa-Samba and took some of their territory. In fact, it was only due to European influence that he did not annihilate them.

Yongo is a powerful and energetic chief and knows his own power. He remarked to one of the authors (E. T.) "If you had not come, Momambulu's head would have been up there (pointing to the skulls behind him) with the others." He also remarked, "I have sufficient rubber for ten years. When that is finished

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[1] S., p. 60, AB., p. 151 (Bumba died in 1873), F.

I shall take the territory of the Bagwa-Ndala." He is, moreover, capable of carrying out his threat, and it is quite possible that he will make an attempt on their territory when Muri Kongo dies.

The following few ethnographical details may be of interest.

Both men and women wear a dress composed of a square of palm cloth, but European cloth is found amongst them in considerable quantity, and is obtained from Imbangala traders from Portuguese territory. Unmarried girls leave the buttocks bare; married women wear the cloth so as to cover this part. Chiefs wear a long cloth reaching from waist to ankle, and a second piece over one shoulder. Palm cloth is not made locally but imported from the Ba-Mbala and Ba-Yaka, in exchange chiefly for palm-oil. Bales of cloth are used as currency. No head ornaments are worn as a rule, but some men wear wig-caps on festal occasions.

Bracelets are worn by all women and by free men; slave men are not allowed to wear these ornaments, and if a man gives a bracelet to his slave, the latter becomes *ipso facto* free.

Their method of dressing the hair is the same as that found among the southern Ba-Mbala, though the coiffures are not prepared with such care. The chiefs, however, wear their hair in five bunches. Chiefs also let their beards grow as a rule, though the rest shave.

In one ear both men and women wear a long cane snuff-box, similar to that shown in the illustration of an inhabitant of Luimbe published by Capello and Ivens.[1] The left or right ear is used indiscriminately.

The nasal septum is often pierced, though no ornament is worn there.

Ornaments made of beads, teeth, sections of reeds, cowries, and the native-made blue glass beads from Katanga, are worn; also pendants of wood carved to represent domestic utensils, such as knives, bellows, etc. Knives are worn on the upper arm by men, thrust through a fibre armlet.

Red clay is used for painting the body except by chiefs, who do not paint. Tukula wood is also used, but only for the face. They do not show as much care in their painting as the Southern Ba-Mbala.

Food is scarce in the country; there is not much game, and since the Ba-Kwese are only recent settlers and have been continually at war for many years, their plantations are not larger than necessary for their own personal needs. They cultivate manioc, maize and millet, but they say that the first has been grown only of recent years. This is easily explained by the fact that a manioc plantation requires several years before it yields an adequate crop, and therefore can be cultivated only by a settled people, which the Ba-Kwese have only recently become. The plantations are exceptionally poor, and are made by the women round the houses, except in the north, where more extensive fields are found. All agricultural work is done by women; the crop belongs to the husband. Bread, *Musa*, is made of boiled manioc-flour mixed with flour of millet or maize; it is very dark owing to insufficient sifting of the flour, and is considered of very bad quality by the neighbouring tribes. European salt is used in great quantities. Cooking is performed by the women. Fire is procured by means of flint and steel.

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[1] Cl., vol. i, p. 145.

The Ba-Kwese are not cannibals; but a section of the Bakwa-Mosinga, living near the Kwilu at Ngangu, have adopted the practice since 1900, owing to contact with the Ba-Pindi, and probably in the beginning, by way of reprisal since they have been at war with them; they are not despised by the other Ba-Kwese on that account.

Wine, *Matombe*, is prepared from the *Elaïs*, and is often drunk hot, when it is very intoxicating. Tobacco is smoked in gourd pipes, the leaves are torn to pieces and beaten together into a kind of ball. It is also pounded to make snuff.

With regard to hunting, there is not much game in the country except in the south, and only the Bakwa-Mosinga and Bakwa-Samba are hunters. Hunting is practised by single individuals except when the grass is burnt; then everyone participates. The same weapons are used as in war. No fishing is found.

Dogs of two kinds are found; the ordinary reddish species, and a black variety, commonly called the "Ba-Djok^{e} dog." Both are used in hunting.

Houses are made of grass, square, with a domed roof: they are small and badly kept. The walls are about 1·50m. high: the door is on a level with the ground. There is no verandah. A man of importance has several houses, in one of which he lives, the others being store-houses; in addition each of his wives has her separate hut. Each village extends over a considerable amount of ground, since the plantations surround the huts.

Important chiefs usually receive their guests under a flat shelter.

Carving in wood is practised with great skill, though many articles of this nature are imported from the Ba-Djok^{e}. The great chief of the Bakwa-Mosinga, Yongo, possesses a carved monitor lizard which is supposed to be a great fetish.

Baskets are made, and among the Bagwa-Ndala examples of *coiled* basketry were collected in Baba (Pl. XVIII, B, Fig. 3). It is most surprising to find this type, which belongs to the Eastern and Southern culture-areas, in this locality.

Large mats are made of palm-leaf strips with inwoven patterns, some diaper, some in black and white. These are used to cover beds and hut-floors.

Metal is roughly worked, but no smelting is practised.

Primitive bridges are erected across streams, consisting of a tree-trunk, or poles supported on piles.

They have no canoes; but rafts, composed of three logs of very light wood, each about 2m. long and bound together with creepers, are used. These cannot carry more than two persons, one of whom sits in front and uses a paddle, about 1m. long, consisting of a stick with a split at one end through which are fixed transversely four or five short lengths of wood or palm-rib.

They are great traders, though rather handicapped by the fact that they are greatly distrusted owing to their propensity for robbery. Their chief customers are the Imbangala of Portuguese territory and the Ba-Pindi, from whom they buy slaves. The currency used is brass rod, iron ingots, salt and bales of palm-cloth.

Inheritance is uncertain, but it appears that a man's heir is his brother. Succession to the chieftainship is also doubtful. Yongo, chief of the Bakwa-Mosinga, when asked who would succeed him, got up and went away without replying; Kangufu, his most important sub-chief, said that the successor would be Muata Mbondo, one of Yongo's brothers-in-law; Muri Kongo, chief of the Bagwa-Ndala, said that Yongo's successor would be Sangu, another brother-in-law; while Chatula, chief fetish priest of the Bakwa-Mosinga, said in confidence that it would be himself.

The Ba-Kwese are ruled by absolute chiefs; the Bagwa-Ndala by Muri Kongo, who received his title of *Muri* through his mother, a Southern Ba-Mbala woman; the Bakwa-Mosinga by Yongo, who was originally a Ba-Bunda slave; and the Bakwa-Samba by Momambulu, a pure Bakwa-Samba. Of these, Muri Kongo is universally respected by all Ba-Kwese,[1] though, owing to his extreme age, all real authority is in the hands of his brother Chiboba. Each chief has a council of elders whose advice he takes if it suits him. The three principal tribes are divided into sub-tribes, governed by sub-chiefs appointed by the head-chiefs. Often there are two or three chiefs in the same village; in this case the order of precedence is by age, though the real authority is generally in the hands of the youngest. For instance, in the village of Kingongo, inhabited by Bakwa-Mosinga, there are three chiefs, the youngest of whom, Kangufu, admits the priority of the other two, though his commands are paramount. Treason against the chiefs is punishable by death.

Tribute is paid to the local chiefs, and the three great chiefs claim tribute from the latter. A chief never sits on the ground but on a chair carved from wood, the support of which is often carved to represent a hippo, elephant or antelope. Chiefs eat in their huts and are served by the elders, they may not be seen eating or drinking.

An account of the reception of one of the authors by Yongo may be of interest. Yongo sent a number of his elders to meet the guest in the village but a quarter of an hour's distance from his hut. These elders were armed with brooms to sweep a place for the interview, and sticks to keep back the crowd. Then Yongo arrived with a number of his slaves, no word was spoken, but the visitor's belongings were carried into the chief's enclosure, and after an interval, the visitor was invited to enter. Yongo was sitting under a shelter of leaves in front of a number of sticks, each of which was surmounted by a human skull.

The guest announced the purpose of his visit, and the elders replied with a chorus of *Zambi, Zambi,* (Well, well), at the same time striking their breasts. The chief replied, and for nearly half an hour enlarged upon his own greatness; at the close, offering a present of a fowl and a she-goat or a castrated he-goat (an entire he-goat was first offered but was refused, as, according to Ba-Kwese ideas, unfit to be eaten by a great man). The crowd again exclaimed *Zambi, Zambi,* then the visitor gave the chief the ordinary greeting *Kwakola,* and shook hands. After this business was discussed. This is the ordinary ceremonial observed upon the arrival of an honoured guest. As a rule the Bagwa-Ndala receive their guests in a very friendly manner, while the Bakwa-Mosinga try to rob them; the latter are most aggressive robbers in the whole of this district, even Yongo himself does not trust them, but says that they are great thieves.

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[1] So much so that when the Eastern Ba-Kwese, under the leadership of Yongo, re-crossed the Kwilu, they refrained from attacking the territory under his direct rule.

Polygyny exists, and, besides their wives, chiefs have a number of slave-concubines.

Children appear to belong to the maternal uncle for this reason; one of Yongo's sons wanted to accompany the visitor when he departed, Yongo said that the matter was one for Muata Mbondo, his brother-in-law, to decide. However, children remain with their father at least until puberty. Many slaves are kept; nearly all are foreign, mostly Ba-Pindi and Ba-Bunda; they are very well treated, take part in war, and may marry anyone; they are inherited with other property.

The Ba-Kwese are famous as makers of musical instruments called *Kimbanda* (pianos), and a number are exported throughout the country. The sounding-boards are of palm-ribs, and the keys of slips of bamboo. They are very well tuned. The Ba-Kwese were not heard to sing; probably they do not do so in the presence of strangers.

The *Marimba* is also found among them; though this instrument has probably been adopted from the Ba-Lua, amongst whom it is in general use. These they never sell. Drums and friction-drums are also found; these are chiefly used in war.

As to morality, lying is considered a proof of intelligence; adultery is a personal injury. Theft and rape are thought disgraceful by the Bagwa-Ndala, though the Bakwa-Mosinga and Bakwa-Samba, being warrior-peoples, are rather proud of such acts. Blood-revenge is practised, and a whole tribe will rise to punish a murder.

In war all adult males take part, that is to say, all males above the age of ten or thereabouts; the fighting men are summoned by means of drums; the sub-chiefs are summoned by the great chief. They are brave, especially the oldest amongst them, who are placed in the rear to prevent the younger men running away, a precaution which, however, is hardly necessary amongst this people. The weapons are large bows, like the war bows of the Southern Ba-Mbala, and guns. The Bakwa-Mosinga possess the most guns, which they have acquired from the Imbangala in return for slaves and rubber. Some of them even possess breech-loaders. They make determined attacks upon the hostile village, and no quarter is given. Night attacks are frequently made.

The chief remedies for sickness are charms, blisters, by means of hot stones, and cupping. Syphilis is known and not uncommon.

No funerals were observed, but the natives said that if one of the great chiefs dies the whole country mourns, and that the ceremonies connected with the burial last several months, during which all ordinary occupations are suspended.

They recognise an evil spirit who causes sickness through the instrumentality of someone he has possessed. An individual accused of possession is forced to drink a decoction of the bark of the *Erythrophlœum Guineense*: he then runs about the village followed by his friends and enemies, the former proclaiming his innocence, the latter his guilt. His innocence is proved by his vomiting the *whole* of the poison he has swallowed; if he fails to vomit, or vomits only a small quantity, he is killed.

Fetishes are kept in small huts each built round a large tree; it was impossible to obtain permission to enter one of these, or to witness the operations of the magician.

It is interesting to notice that, at the entrance to the subdivisions of Yongo's village, are found erections composed of two upright poles, connected by a cross-piece and ornamented with palm-leaves, similar to the *Mabili*, illustrated by Dennet, *At the Back of the Black Man's Mind*, Plate VI.

BA-DJOK^{E}.

The Ba-Djok^{e} are a branch of those people known variously as Kioko Kioque, Chiboque and Va-Chioko. The first form of the name has been used in this paper since the Ba-Kwese certainly pronounce it in this manner. The history of this people is rather complicated, and, as it is bound up closely with that of the state of Lunda, it will be necessary to have recourse to a large number of other writers. The best account of the early history of Lunda is given by Carvalho[1]: a Luba chief, Ilunga, a great hunter, when on an expedition southward, came in contact with a people known as Bungo, who were agriculturists, and lived in scattered villages under chiefs more or less independent. He married the daughter of the most important of these chiefs, and gradually imposed his authority on the rest, and the nucleus of the Lunda empire was formed. Of course a number of his own people followed him, but the great majority of his subjects were the agricultural folk by whom he was accepted. This point must be kept in mind, since we are told distinctly at a later date that the Ba-Lunda were not hunters. His brother-in-law, who had quarrelled with his father, was the Kinguri who emigrated west and eventually founded the Ba-Ngala (Imbangala, see p. 142) people. Shortly after his marriage and accession to power, another emigration of malcontents took place, among whom were two chiefs named respectively Muzumbo Tembo and Ndumba Tembo. The first of these constituted the Songo people on and around the Luando, and one of his descendants married Bihé the hunter, a chief of a tribe further to the south, who organised the Ba-Bihé as a tribe. The second founded the Kioko, of whom the Makosa are a branch.[2] The tribe of the Minungo were formed in the same way and at the same time. Most authorities agree that these events took place early in the seventeenth century.

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[1] C., p. 59 foll.

[2] A similar account was given to Capello and Ivens by a subsequent Kioko chief also named Ndumba Tembo. CI., vol. i, p. 190.

The Kioko people grew up in the neighbourhood of Cangombe, on the plateau land where the sources of the Luando, Kwango, Kasai and Lungwebungu are situated, in close connection with the Luchaze and Lobale peoples. Now in this case, as in all where new tribes were founded by Bungo or Lunda chiefs, the said new tribes contained a far larger number of aborigines than immigrants, and the conquerors inevitably became more or less merged culturally in their subjects. The most striking feature of the Kioko in later times is that they were essentially a nation of hunters and iron-workers,[1] but principally the former. As it has been stated the dominating immigrants were not hunters but an agricultural people, so that their fame in the chase must be referred to the aborigines whom they subdued. As far as the probabilities go, in the present state of our knowledge, it seems safe to infer that these must have been Lobale, or Lobale and Luchaze mixed. The affinities of these peoples are by no means certain, but they seem far more closely related to the "Southern Bantu" than the "Central Bantu." It may be remarked in passing that nothing is more striking in the early history of this part of Africa than the importance of the hunter; Ilunga, as stated above, was a hunter, Bihé was also a hunter,[2] and, according to Capello and Ivens[3] the "real aristocracy" among the Jinga is composed of hunters and warriors. The chief character in the peculiar politico-religious revolution which resulted in the institution of the riamba cult among the Bashi-Lange was a hunter, and the *pakassero* revolutionary society of Magyar[4] was a society of hunters.

The profession of hunting naturally induces an adventurous and self-reliant character, and encourages a roving disposition, so it was not long before the Kioko began to expand. Serpa Pinto[5] speaks of their constant imigration into Luchaze territory, but with movements in this direction we need not deal. Buchner[6] states that the Northern Kioko may be divided into three branches, that of Ndumba Tembo (a descendant of the founder), still occupying the Kwango-Kwanza plateau; that of Mona Kiniama, on the Kwilu; and that of Mona Kissenge beyond the Luachim. The two latter appear to be offshoots of the first, and it is from the second of the three that the Ba-Djok' of the present paper seem to be derived. To return, however, to an earlier date: Carvalho[7] relates how, in the reign of Umbala, the seventh successor to Ilunga, the Kioko had begun to mix in Lunda politics, and in the reign of Noeji, the next sovereign but one, who received Graça in 1847, numbers of Kioko were invited into Lunda state to hunt elephants, the Ba-Lunda not being hunters themselves.

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[1] SP., vol. i, p. 270; S., p. 28; W.^{1}, MB.^{3}, p. 3761, etc.

[2] SP., vol. i, p. 156, etc. This author, on p. 174, also mentions a festival called the "Feast of the Quissunge," at which four women and one man were killed and eaten: it is interesting to note that the man in question must be a deer-hunter.

[3] CI, vol. ii, p. 69.

[4] LM., p. 266.

[5] SP., vol. i, p. 270, and vol. ii, p. 108.

[6] MB.^{3}, p. 3761.

[7] C., p. 548.

He further states that many of the Ba-Lunda were greatly annoyed at the presence of these Kioko, and narrates the collisions which ensued between the inhabitants and the visitors. But the energy of the Kioko in hunting and trade was destined to overcome all obstacles; and, though in 1856 they had not passed 9°,[1] in the time of Buchner, the latter states that the Kioko were crossing Lunda state in two compact lines, following the courses of the Kwilu and Luachim, and that the Lunda empire stood in great danger of being cut into sections by them.[2] Schutt[3] relates the first arrival of a Kioko in the territory of the Bashi-Lange, and Wissmann[4] speaks of the ivory trade between the two people as having been established some years; the latter[5] also mentions the Kioko as far north on the Chikapa as about 7·30° S., and Buchner[6] states that in his time they had reached to 7° S., having moved up from 10° S. in twenty years. They subsequently continued their progress northwards as far as 6°, but were driven back to 7° by the Ba-Pindi assisted by the Ba-Kwese and Ba-Bunda as already related.

CONCLUSION.

The history of the various migrations may be summed as follows. The aborigines of the Kwilu were, in all probability, the Ba-Samba, Ba-Songo, Wa-Ngongo, and, possibly, the Ba-Bunda, the Ba-Yaka extending from the Kwango to the Inzia. The Ba-Yanzi moved down from the north, occupying peacefully a country, which was, as yet, very sparsely inhabited. The Ba-Pindi came next, from the Upper Kwango, occupying the country from the Inzia to the Loange, and reaching as far north as 5·30° S.

Almost immediately, the Ba-Mbala were forced up, from their home on the head waters of the Kwengo, between the Ba-Yaka and Ba-Pindi. This movement had its origin in troubles further south, the ultimate cause being the Ba-Djok^{e} applying pressure to the Ba-Lua, who, in their turn, attacked the Ba-Mbala and drove them north.

At the same time a tribe of Ba-Yaka revolted from the Kiamfu, and spread eastwards to the Lukula.

Shortly afterwards the Ba-Huana, coming from the north, probably the region of Stanley Pool, cut through the Northern Ba-Mbala, and occupied the banks of the Kwilu. Then followed the arrival of the Ba-Kwese from the Upper Kwango. This people occupied the two shores of the Kwilu, forcing their way in between the Ba-Mbala and Ba-Pindi. Being a people amongst whom the tribal feeling is very strong, they had probably forced their way through the sterile country occupied by the Ba-Lua. They were stopped in the north by the Ba-Bunda, Ba-Pindi, and Ba-Mbala; probably their arrival was the cause of the extension of the Ba-Pindi to the Kasai, where they were found by Wissmann.

About this time a section of those Ba-Yaka, already established on the Lukula, appear to have forced their way through the Ba-Mbala eastwards, crossing the

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[1] C., p. 91.

[2] MB.^{1}, MB.^{2}

[3] S., p. 145.

[4] W.^{2}, p. 41.

[5] W.^{2}, p. 52.

[6] MB.^{2}

Kwilu somewhere near the present site of Mitchakila, fighting the Ba-Pindi, Ba-Mbala, and Ba-Huana. Further fighting resulted in the Ba-Pindi, who, in this neighbourhood, are very warlike, cutting off the eastern section of Ba-Yaka, which now appears as an enclave. The section of the country in the extreme north of the present Southern Ba-Mbala territory appears to have belonged at no very remote date to the last-mentioned branch of the Ba-Yaka, since villages are found there, the inhabitants of which, though Ba-Mbala in habits and speech, admit that they are descendants of the Ba-Yaka; moreover, one of the chief villages is called Kiyaka. The enclave of Ba-Huana to the west of the main body seems to have been formed at the same time and as the result of the same troubles. In fact, at this period, the mouth of the Kwengo appears to have been the focus of deadly intertribal strife. Then followed the later movements of the Ba-Kwese, which have been related in detail in the section dealing with the history of that people, culminating in the driving back of the Ba-Djok^{e}, who had meanwhile penetrated as far north as 6°, and the laying waste of the strip of territory which now separates them from the Ba-Lua and Ba-Pindi.

SUPPLEMENTARY NOTE, BY T. A. JOYCE.

One of the most important points which may be raised by any paper dealing with primitive peoples, and one to which few authors furnish an answer, concerns the manner in which the information given was collected.

As the actual collection of the original material embodied in this paper is the work of Mr. Torday, such explanation falls, perhaps, most naturally to me. Mr. Torday was fortunate to acquire a fluent knowledge of the dialects spoken by the Ba-Mbala, Ba-Yaka, and Ba-Huana, and his investigations among each of those tribes were carried on personally, without the aid of an interpreter, in the native tongue.

With regard to the Ba-Yanzi, though not speaking the language fluently, Mr. Torday knew sufficient to be able to keep an efficient check upon his interpreter on the rare occasions when the services of the latter were necessary. As a matter of fact, most of the information concerning this people was obtained directly from Kangwe, chief of Matasu, and Mwama, confidential slave of Chitutu, the chief of Nganga, both of whom spoke Kimbala and Chikongo, the latter being a language in which Mr. Torday is also versed.

Among the Ba-Kwese, Muri Kongo, chief of the Bagwa-Ndala tribe, was the son of a Mo-Mbala woman, and spoke his mother's language with ease; all the particulars concerning this tribe, and many relating to the other two, were obtained from him direct. Among the Bakwa-Mosinga, Tochi, the son of the chief Yongo, acted as interpreter between Mr. Torday and his father, the language employed being Chikongo. The rest of the information concerning the Ba-Kwese was obtained directly from Kangufu, chief of Luchima (Kingongo) who also spoke Chikongo.

As for the Ba-Pindi, most of those with whom Mr. Torday came in contact (on the west bank of the Kwilu) spoke the dialect of the Ba-Mbala.

The importance of an investigator being able to obtain his information personally, by means of the local dialect, cannot be over-estimated; not only are the grave risks of misapprehension, which attend the employment of an interpreter, obviated, but the natives themselves are far more inclined to speak freely to one who shows himself conversant with their own tongue. It has seemed advisable to make some such statement as this, since the value of any paper lies, not so much in the quantity of the information which it contains, as in the degree of reliability which can be attached to it.

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Description of Plates.

PLATE XVII.

A.—1. Northern Ba-Mbala fetish figure plastered with the clay (*kissi*), without which the figure has no supernatural value. From Mokunji.
2. Northern Ba-Mbala head-rest: from Putumbumba.
3. Ba-Pindi figure.
4. Ba-Pindi mask.
B.—1. Southern Ba-Mbala figure.
2. Ba-Bunda whistle; Kancha River.
3. Ba-Yaka fetish mask; Zange.

4. Ba-Pindi hoe-handle; the blade is fixed in the mouth of the human face and the two horn-like appendages at the back are used for scraping aside the weeds already removed from the ground.
5. Ba-Bunda sword; Kancha River.
6. Ba-Kwese basket; for flour.

PLATE XVIII.

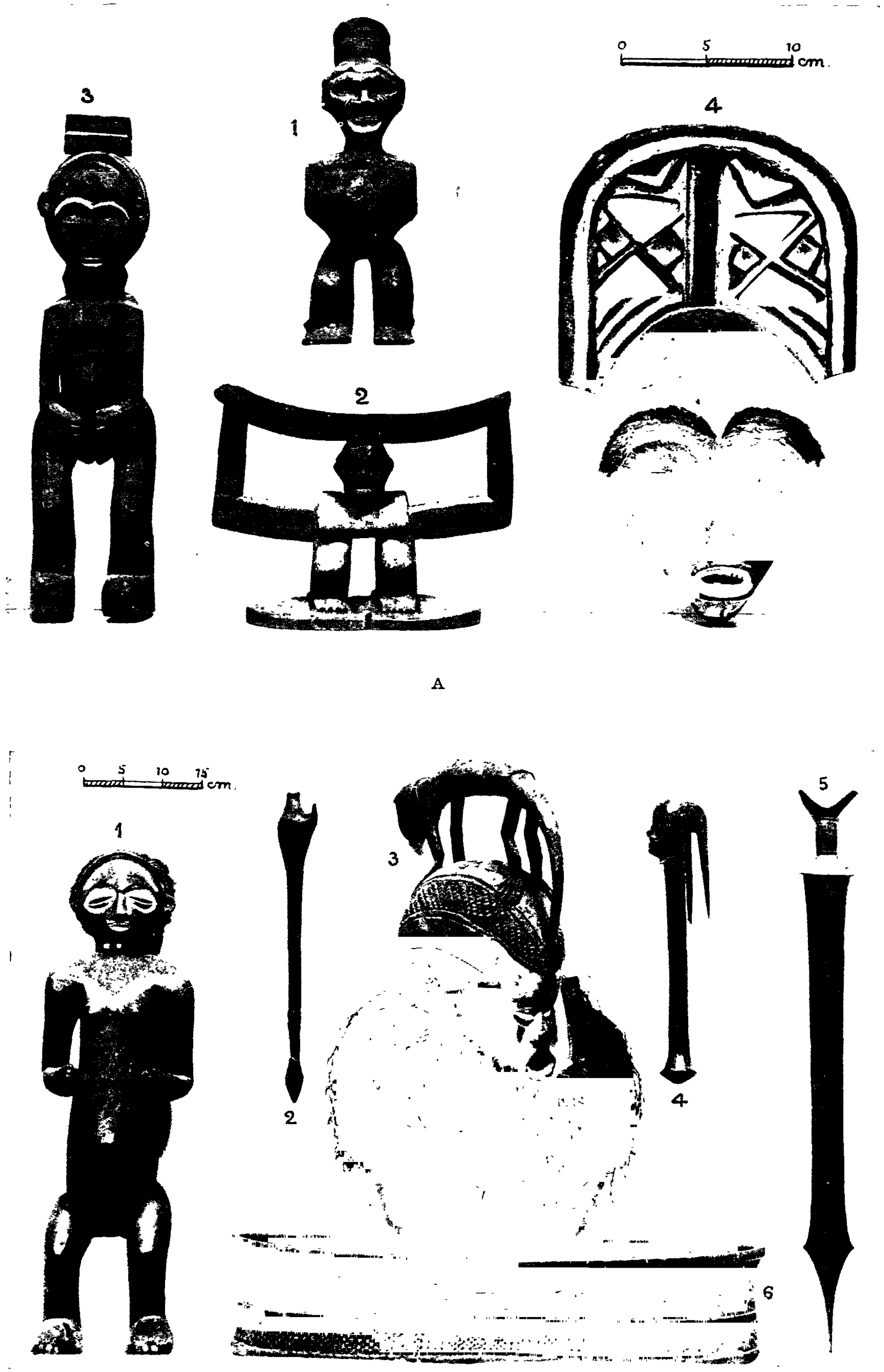
A. 1. } Ba-Pindi pile-cloth, made from palm-leaf fibre and coloured red.
   2. }
   3. Ba-Bunda cloth, with inwoven pattern in black; Kancha River.
B. 1. Ba-Kuba figure.
   2. Ba-Bunda drinking-cup of woven string; Kancha River.
   3. Ba-Kwese coiled basket; for food.
   4. Ba-Bunda cup of carved wood; Kancha River.
   5. Ba-Pindi. Ditto.

PLATE XIX.

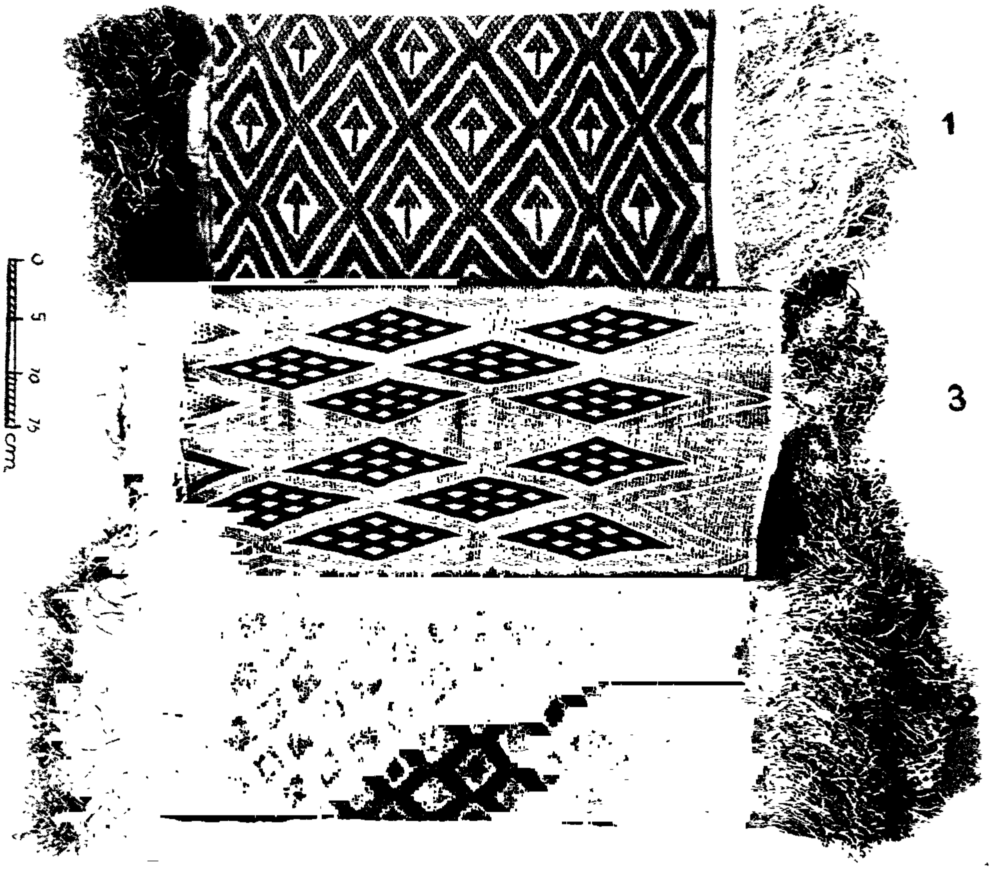
Fig. 1.—The Kiamfu of the Ba-Yaka and his councillors.
Figs. 2 and 3.—Southern Ba-Mbala warrior.

PLATE XX.

Map of the Kwilu Basin. The authors route by boat up and down the river is indicated by a dotted line in red, and not, as said in the key, by a solid line.



THE ETHNOLOGY OF THE SOUTH-WESTERN CONGO FREE STATE.



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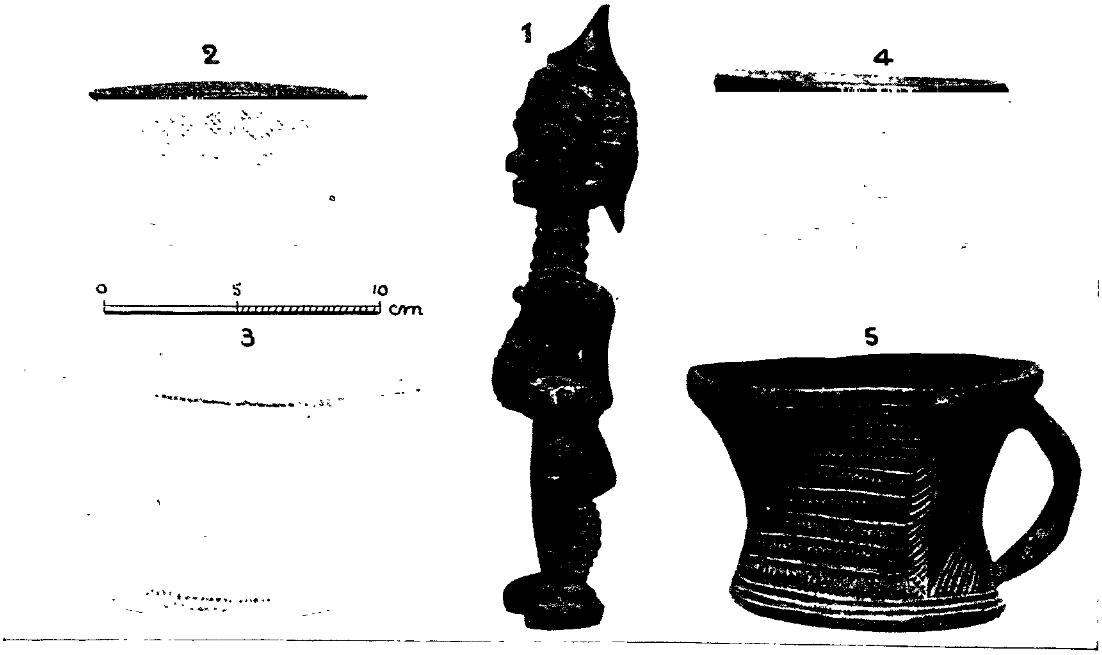

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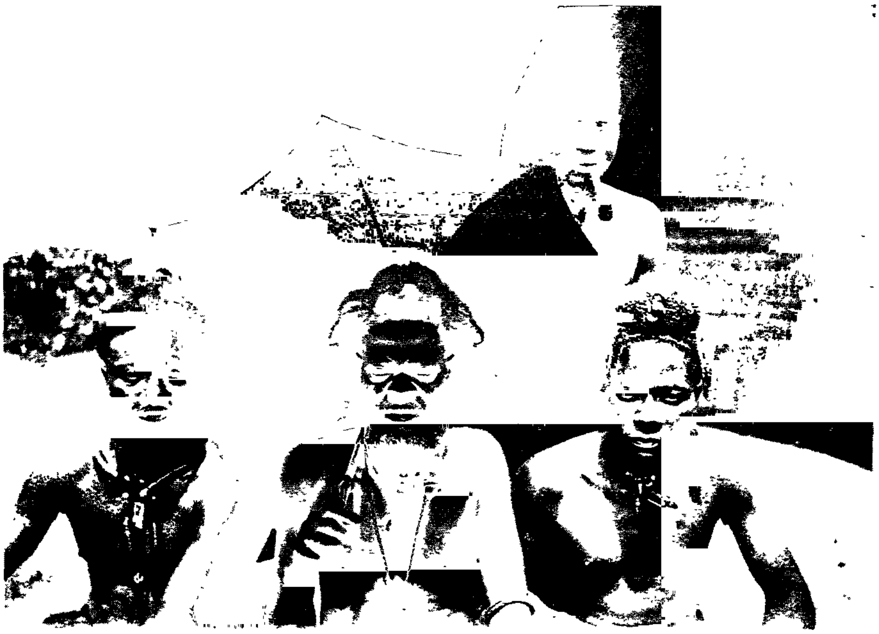


Photo by Rev. Father R. Butaye.

FIG. 1.—THE KIAMFU OF THE BA-YAKA AND HIS COUNCILLORS.

FIG. 2.—SOUTHERN BA-MBALA WARRIOR.

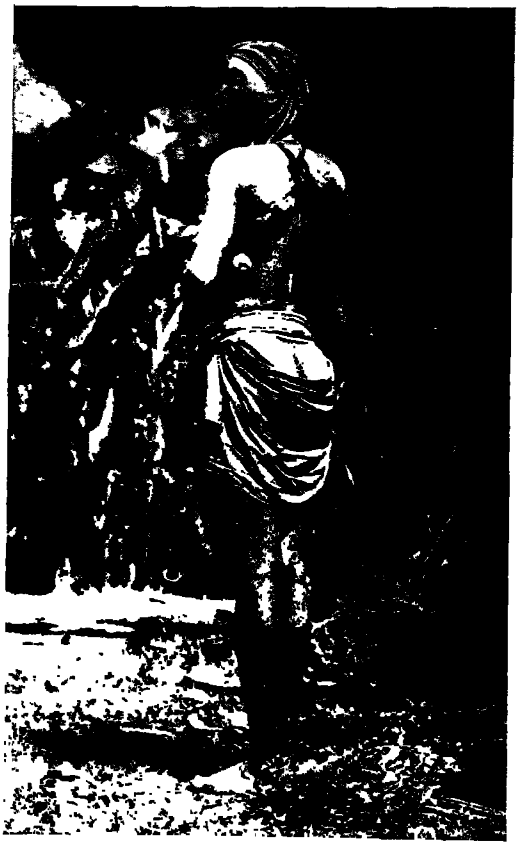
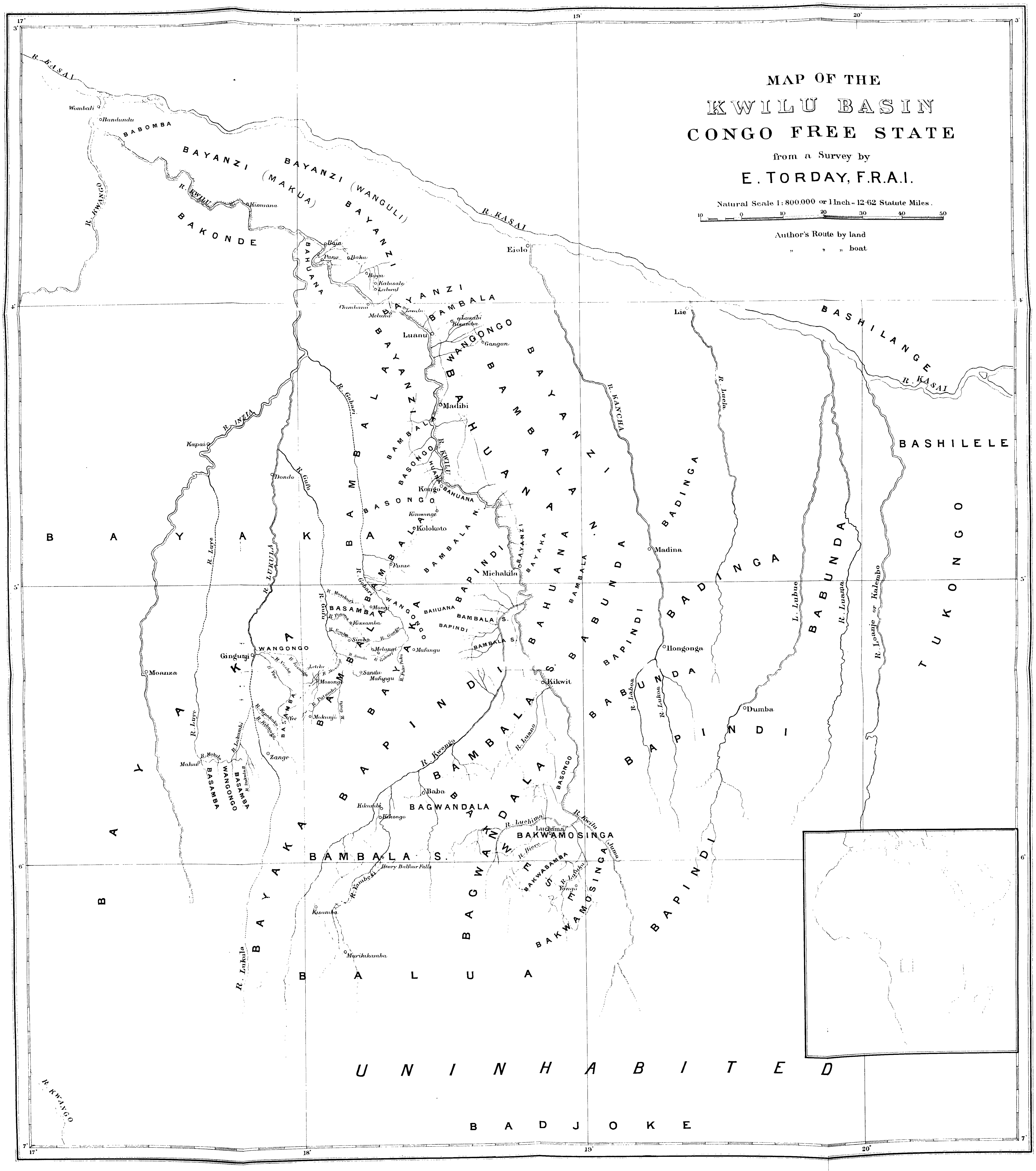


FIG. 3.—THE SAME.

THE ETHNOLOGY OF THE SOUTH-WESTERN CONGO FREE STATE.



MAP OF THE KWILU BASIN CONGO FREE STATE

from a Survey by

E. TORDAY, F.R.A.I.

Natural Scale 1: 800.000 or 1 Inch = 12·62 Statute Miles.

Author's Route by land

" " " boat

ON THE MEDICINE-MEN OF THE TEN'A.

By the Rev. J. Jetté.

The following sketch is exclusively limited to a branch of the widespread Athabaskan stock, living in the central part of Alaska, on the Yukon River and its tributaries from Tanana down to Koserefsky. The distance between these extreme points is about 440 miles, and the natives scattered over this region may number 2,000 souls, but hardly more. Nulato occupies a central position in this tract, being at 200 miles below Tanana and 240 above Koserefsky. The natives directly depending on the Nulato Mission for spiritual assistance are distributed over an area; 200 miles long, from Narardotiłten (Na‘ha‘hdotiłten), 70 miles above Nulato, to Blackburn, 130 miles below Nulato. By actual count of the names entered on the Mission Records, they number 700 and some odd souls. Supposing the remainder of the area above mentioned to be proportionally populated, which is rather to underrate its population, the total number ought to be 1,540. Making an allowance for the names not entered on the Mission books, one will easily admit that the group of Indians to whom this paper refers is composed of more than 1,600 and less than 2,000 individuals. In 1883, one of the most accurate explorers of Alaska, Frederick Schwatka, estimated their number to be between 1,200 and 1,500 people (*Compilation of Narratives of Explorations in Alaska*: Washington, Government Printing Office, 1900, p. 349).

They will be called in this paper *Ten'a*, a word which, in their language, means *man* or *men*, and is found with the same meaning in the languages of related tribes, under the forms *Tinneh*, *Dēnē*, *Dindjie*, *Tindjih*, etc. To the Russians they were known as *Ingaliks* or *Ingalects*, an offensive appellation, meaning "the Lousy," given to them by their Eskimo neighbours, who deserve it much more. The group here concerned is neatly divided in two tribes which join precisely at Nulato. This place is, on account of the fact, occasionally designated by them as *nit-ro-tenatadlerunten* (nił-‘ho-tenatadle‘hunten), literally, the place where we are knotted together.

The locality and the people referred to being thus defined, let us proceed.

The Ten'a lore has it that in the old, old times three men started out a-hunting together. Two of them were very rich and influential in their tribe; the other was poor but smart and "brainy." After many wanderings, they began to starve; and as no game offered itself, the "brainy" man proposed to go back. The others laughed him to scorn, notwithstanding which he started to return home, they pursuing their adventure. They roamed about, to the very ends of the earth, continually pressed by hunger, sleeping in the open, and undergoing all kinds of hardships. They were growing thinner every day, their skins were tanned. their hair grew long and tough, their clothes were torn to rags. They looked more like wild beasts than like men, and began to live as animals. Finally, they were transformed the one into a wolf, the other into a wolverine. And this is the reason why, up to this day, when a Ten'a hunter kills one of those animals, it is brought, in great pomp, to the camp. "The chief is coming," they say to each other. The village goes out to meet him. The dead animal is brought into a cabin; the medicine-man spreads a red blanket before it and arranges it into a sitting posture. Then they proceed to offer him a banquet, each family sending a dish well filled with the best food they can procure. These are placed on the blanket, and when the lord of the forest is supposed to have enjoyed them enough and satisfied his posthumous appetite his admirers do the eating for him, and they acquit themselves of the task very creditably indeed. No woman is allowed to taste of the offered dishes, men only being entitled to eat the wolf's or the wolverine's banquet. So much for the two desperate adventurers. The third one, on his homeward journey, was beset with wonderful trials, passing through forests where the trees entered into a dance around him, canoeing through narrows where the huge cliffs moved to and fro, as enormous jaws trying to devour him; but when he finally reached his village, after a long absence, he was endowed with supernatural powers. He had become a medicine-man, and this is the first record of a medicine-man in the fabulous annals of the Ten'a.

For the understanding of what has to be said it will be useful to remark, before going any further, that the Ten'a have a wonderful faculty for believing or disbelieving what they choose. Their intellect seems to be altogether at their will's command, ready to give or refuse its assent according to the direction which it receives from the will. They never judge of the credibility of a report or statement on the merits of the case. Their criterion is neither the intrinsic credibility of the fact, nor the extrinsic evidence of testimony that may accompany it—although they are generally inclined to believe whatever is being said. The ultimate reason, which can be detected in almost every instance as the one that really determines their belief, is: what benefit shall accrue to me from such a belief? If they see in it their own advantage, nothing more is required. To illustrate this statement, I may be allowed to quote from personal experience. Many a time have Ten'a people offered to me to believe all my teachings and profess themselves Christians, for the consideration of a sack of flour, or a pound of tea, or a head of tobacco. And when I answered that I did not care for such neophytes, they laughed at my simplicity, but I am sure they did not understand the reason of it. Notwithstanding this reply, however, which has been given them hundreds of times, as late as Christmas 1905, they came in a deputation to the Nulato Mission, to make some arrangements about the Christmas celebrations, requesting that the Mission would contribute a gift to the rejoicings of the people, "and," they added, "if you do so, we shall all believe your teaching, without exception."

This disposition is the cause of the phenomenal credulity with which they accept all the absurd sayings of the medicine-men, because they fear woeful consequences if they refuse to believe. Similarly it causes the equally transcendent incredulity with which they disbelieve any teaching that does not suit their taste with an obstinacy that sets at defiance the most stringent and persuasive arguments of our logic.

This frame of mind is partly bred in them, but mostly acquired through the constant and sedulous exertions of their parents, relatives and friends. When the mind of a child has once been thoroughly bent to believe several of those absurdities, for reasons about as absurd as the things themselves, it loses, as it were, its natural independence. It judges of things no longer according to what it sees in them, but according to what is said about them, and the noblest faculty of man is dulled and numbed to practical uselessness. I do not know whether all savages present this phenomenon of intellectual degradation, but I have repeatedly noticed it in these. And it is a painful sight indeed, for one trained to think and reason, to see so many of his fellow-creatures trained, so to speak, to *unthink* and *unreason.*

The religious tenets of these people are most rudimentary. They have no religion, in the proper sense of the word, *i.e.*, inasmuch as religion implies the relations of man with the Deity. They have even no notion of God, and seem to have been, for ages back, devoid of any knowledge of the Supreme Being. All their belief is centred on the devils. They know of nothing else that transcends the visible world. But the existence, the power, the continual action around them of the evil spirits, are things as familiar to their minds as is to us the notion of Divine Providence or of the power of the Almighty. And since, as has just been remarked, their power of belief is very great, the intensity as well as the extent of their devil-belief is beyond our conceptions. Their imagination is always on the alert to descry some devil moving about in the dark or in the broad daylight, as the case may be, and no caprice of the unruly fancy is too strange for them to believe. Hence, to hear them talk, one would think that they are constantly in touch with the devil, that they have seen it hundreds of times, and that they know by their names almost the whole court of His Satanic Majesty. Any one of the older folks on this subject would put Leo Tascil in the shade. Instances might be adduced without end, but, to keep within the bounds, I shall only quote two.

Last year, a native of Koyukuk Station, Thomas Dat'on, who is not a medicine-man, nor the near relative of a medicine-man, and who in practical matters is a sensible fellow, perfectly straight and square in his dealings, a married man with a little family of three nice children, and whom I have every reason to think perfectly sincere, related to me, very seriously and in great earnest, the following fact. It happened in March, 1905. "I was on the spring hunt," he said, "walking alone in the woods. I heard some noise behind me, as of one walking, and suddenly, before I had time to turn and look, I was seized around the waist by what seemed to be a short man about four feet high. The two hands, as black as that stove," and he pointed to one near by, "clutched in front of me, were all I could see of the fiend. His grasp was strong, but, besides, I felt inwardly overpowered. Although my arms were free, I had not the strength to raise them in defence. My breath almost failed me; my heart was beating as if wanting to jump out of my breast, and I was sweating profusely. I made some feeble efforts to disengage myself, but I felt powerless. I was conscious that the one holding me was a devil, though I could not see him. Then I tried to remember the words of prayer, but not one came to my mind. I made more and more efforts, till, at last, I recalled some few words which I had heard in the church. As soon as I uttered them the grasp of the black clutches began to loosen. At the same time my memory seemed to grow stronger: I succeeded in repeating a whole sentence. Upon which I suddenly felt myself free. There was a running behind: I turned, and saw a black thing disappearing among the trees." It would be useless to relate the argument which we had over this. Suffice it to say that no reasons of mine could convince him of his mistake, nor even give him the slightest doubt: he had seen and felt; and how could he doubt?

In January, 1906, I happened to be talking, at Kaltag, with Augustus Tsaika, a man about thirty-five or forty years of age, who has had successively two wives, the last one dying in the fall of 1905. We were speaking of the medicine-men and their devils. "Well," said Tsaika, "I am not a medicine-man but I have seen devils many times. Once, we were about fifteen in a cabin, on the Innoko River. It was rather late at night. I went out. The door was not opening directly outside but into a sort of a shed, having large openings on both sides. It was bright moonlight and the floor of the shed was as white as snow, the moon shining on it. As soon as I stepped out of the cabin, I saw a black thing, shaped exactly as a man, but shorter, lying on the floor in the white moonlight. 'Oh! oh!' I thought, 'here is a devil.' I was not scared, because I had been well instructed how to behave under such circumstances. I went to it and passed my hand all over its body. The natives who know about it," he remarked, "always do so: and if you do, the devil will not harm you. I touched it all over: it was cold and quite hairy. When I touched the arm-pit, he began to chuckle. I stopped one moment and . . . it was gone. I did not see it any more. I struck a match and looked in the corners of the shed: nothing. Then I went in, and told the others about it. 'Oh! yes,' they said, 'we see him often. He is quite a customer around here.' In the same place," he went on to say, "there lived a man who was frequently invaded by a devil. Once we were about twenty persons, squatting around in the cabin. He was among us. Suddenly he stood up, unbuttoned his trousers and drawers, and his belly swelled to enormous proportions. Then he began to tell us many secret things, that were perfectly true, but were known only to a few of us, so that he made many ashamed of themselves. But no one dared to reply, because we all knew that the devil was in him. He was several hours in that condition, after which he began to feel very thirsty. In a short while he drank up all the water that was in the house. In the corner, there was a pretty large tub, one half of a large barrel which had been sawed in two. This had been used, according to the custom prevalent in that place, as a chamber-pot. It had not been emptied for months and had a terrible stench. Well, you wouldn't believe it, but I saw it: he drank it all, to the very last drop, and then the devil left him." He continued: "The poor man died some years after, whilst the devil was in him. I was there and saw it too. His belly was so swollen that they could not fold up his legs, to bury him in the ordinary position" (that of the child in the mother's womb); "so they remained half-stretched. He was so heavy that no two men could move him. They tied him to a pole just about the size of this stove-pipe" (it was 7 inches in diameter), "then four men got hold of each end, and the eight of them carrying the pole on their shoulders began to move, with great difficulty, towards the burying ground. But, before they reached it, the pole broke suddenly, though it was a tough green spruce, and the body fell so heavily that it sank into the ground and made a grave for itself. We lined it with birch bark, pushing it down with sticks, for no one would venture to go down in the hole, although it was large enough. Then we heaped logs and stones over it. It is still there: anybody can show it to you, if you go to that place."

These instances will be sufficient to show in what sort of an intellectual atmosphere the Ten'a live. Thus one may better understand how they really believe the tales of the medicine-man, and what sort of an influence he exercises over them.

To return, then, to the religious or philosophical notions of the Ten'a.

They believe in the existence of numerous devils, spirits, indeed, but with a sort of an aërial body, not of the same matter as our own bodies, but, as it were, something intermediate between body and soul. They are termed, in general, *tsonteye*, evidently from *tso-neta-ye*, the evil thing, or *nekedzaltara* (nekedzalta'ha), a word which could be rendered as the *swifts* or the *quick-movers*, the prefix *dza* with the root *tar* (ta'h) being used to signify dances and quick motions.

These spirits are essentially malignant, and their sole purpose is to do harm. There is a sort of a hierarchy or subordination among them, the most powerful being always spoken of as *tsonteye*, never as *nekedzaltara*, but the inferior being indifferently designated by either name.

Some spirits minister to men, mostly to help them in doing evil, but cocasionally also to provide for them the necessaries of life. Even in this, however, the spirit's intention is to do harm, viz., to the enemies of the one whom he helps. They do not actually suppose that the spirits help men, but that men, who have power to command the spirits, by this means may help other men.

A spirit, considered in his capacity of familiar demon or being ministering to a man is called *sen*, a root-word which seems to have no other meaning, or also, *atta, attaa*, which seems to mean a male, for the root-suffix *ŧta* properly means *male*, as appears in *ranōlta* (hanōlta) a male-deer, a buck, from *ranōya* ('hanōya) a deer; *ŧinŧta*, a male-dog, from *ŧik*, dog, etc. These words are used mostly among the adepts, the common people, in ordinary circumstances, use the term *nekedzaltara*.

A man or woman, who has at his or her command one of these familiar spirits, is a medicine-man or a medicine-woman, as the case may be. The Indian word for these is *teyen*, a shortened form of *teyenen*, the one who bewitches or conjures, from the verb: *eseyen*, I witch or conjure. They are also called *kōtni, kotniye*, the teller, the one that tells. The Russians designated them by the word *shamán*, which, according to Ivan Petrof, is "a Kamchatkan term for sorcerer or medicine-man, used by many tribes who once were subject to Russian influence" (*The Population and Resources of Alaska*, 1880; printed in the *Compilation of Narratives of Explorations in Alaska*; Washington: Government Printing Office, 1900, p. 108). This appellation is not uncommonly used by travellers and explorers.

There are undoubtedly more medicine-men than women, and I would estimate the proportion to be one medicine-woman for every five medicine-men. Both sexes, however, are equally admissible to the profession, and it should be understood in what follows that what is said of medicine-men applies equally to medicine-women.

Whether a medicine-man can have at his command more than one spirit is a question which I cannot presently answer. I can only say that I never heard of a single instance of the case. It is admitted commonly, though, that, by means of his one spirit, a medicine-man can muster up a few others, to perform some unusual task. An instance of this kind is on record, and this is the legend of the formation of the Kayar (Kaya'h) Slough.[1] The legend runs thus:—The Kayar Indians, once a numerous tribe and having powerful medicine-men, were getting tired of portaging their canoes through lakes and marshes whenever they would come to the Yukon. They requested their medicine-men to have a channel dug for the purpose, which would connect the Kayar settlements, by an all-water route, to the Yukon River. Whereupon three of those worthies joined together, at a place called Tartsenibanten, on an island of the Yukon River, about 20 miles below the actual site of Nulato, and, having gathered the people in one house, charged them not to leave the place nor to look at what was going on, until they would give them leave to do so; for the spirits to be summoned for the purpose were of the highest order, and any profane person, even if he only saw them for a moment, was sure to die. Then they set to work and began the incantations. Seven spirits were detached for the expedition. They started from a point opposite to the island, on the south bank, and began to make their way to Kayar, swallowing up the ground as they passed, and a mighty crooked way it was, too, as the interminable winding of the Slough shows up to this day. In a few hours they had joined the Rotolno, and the Yukon rushed its waters through the new channel, towards the Rotolno, making a sharp bend at the junction, and thence flowing down with the peaceful Rotolno, to the lower mouth. When the task was achieved, the seven spirits were tired, and lay down to rest for a while. Whilst they were sleeping, two young men, who were not aware of the presence of these high personages, came down the Rotolno in their canoes. The one who was paddling ahead came unexpectedly at the turn and beheld the frightful sight. He uttered a loud shriek, stood up in his canoe, and dropped dead. His companion saw this, though he could not yet see the awful monsters and it was his good luck that he did not see them. Warned by the fate of the other man, he made for the bank and lurked under the brush for a couple of days, after which he saw the people coming in their canoes from Tartsenibanten, who told him of what had happened. Nothing was ever found of the unfortunate fellow who had with mortal eyes gazed upon the seven spirits.

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[1] In this local meaning, the word *slough*, pronounced *slōō*, designates a side channel or inlet from a river. It is used throughout Alaska, where such *sloughs* are numerous. The Kayar Slough is incorrectly represented, on all the maps I have seen, as two small rivers, the one emptying into the Yukon, about mid-way between Nulato and Kaltag, which bears no name on the map of 1904, is really the entrance or inlet of the slough; the other emptying into the Yukon below Kaltag, called Kaiyuk River on the same map, is properly the outlet or mouth of the slough. There is a small river, the Rotolno ('Hotolno) emptying into the slough at its northernmost turn.

The same legend, with some difference in the details, is current about another slough, opposite the mouth of the Koyukuk River. In this case, however, the medicine-men were many, and the spirits, who performed the task, only two. The slough is much larger than that of Kayar, being, in fact, practically the main channel of the Yukon. But the very configuration of the river countenances the native tradition, that the main channel was formerly the northern one, and that the actual southern one is of a comparatively recent date.[1]

The social standing of a medicine-man is, on the whole, a desirable one ; but it has also its drawbacks and its dark side. The medicine-man is decidedly influential among his fellow savages. He is consulted and listened to, on account of the superior knowledge imparted to him by the spirits. He is feared, on account of his power to do evil, viz., to cause the death of a person, to ruin his undertakings, to render him unsuccessful in the hunt by driving away the game from his path, to cause the loss of his property, of his strength, of his health, of his faculties, etc. The medicine-man is rich, because his services, when summoned, or even when accepted though uncalled for, are generously remunerated. He is respected on account of his continual intercourse with the supernatural world. His words, when said in a peculiar low tone, with a momentary glow in the eyes, which seems able to control at will, or when uttered during his sleep (real or feigned), are taken as oracles, as the very words of the spirit. In short, for these tribes who have no chiefs, no religion, no medical knowledge, he is the nearest approach to a chief, a priest, and a physician : to a chief, because he practically forms and models the public opinion, the only rule among Ten'a, to a priest, because he acts as the intermediary between the visible and the invisible world, to a physician, because his power enables him to cast away devils by which diseases are caused.

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[1] It is to be regretted, indeed, that these medicine-men are not hired by the Panama Canal companies : there would be a great saving of time and money.

One ought to add that all diseases, according to Ten'a medicine, originate in a spirit locating himself in a person's body. The medicine-man, having a devil at his service, may, by means of it, expel the intruding spirit, provided, of course, that his own demon be more powerful than the intruder. If the reverse happens, he fails in his attempts to cure the sick person, and incurs no odium by the fact. It is not his fault, if his spirit is not stronger than the opposing one, and he is not made responsible for it.

It is readily acknowledged that every individual spirit has but a limited power, and this accounts for the superiority of certain medicine-men over others: it is all owing to the superiority of their spirits. And when it happens that two medicine-men are enemies of each other, the one who has the stronger spirit is sure to triumph over his opponent sooner or later. But this is a great source of mischief to the relatives of a medicine-man. If he happen to be at odds with another, each spirit working zealously for his own man, the darts, so to speak, which are sent by one spirit may be averted by the other, but if this other spirit is not very powerful he will only turn aside the infernal darts, which will strike the relatives of the medicine-man, leaving him unhurt. I had an instance of this in the spring of 1905, when one of the Kaltag Indians, Ignatius Kayinel'an, commonly known as "Big William," was accidentally shot by one of his companions on the hunt. As he did not die immediately, I was called upon for medical assistance and went to Kaltag, but found him already dead. His brother-in-law, amidst his lamentations, addressing me, said: "Why is it that there are still medicine-men living among us?". As I failed to see the connection, I enquired why he said so. "Don't you see?" he replied; "two of his uncles are medicine-men, and they have many enemies. Now some of these, being medicine-men themselves, are trying to kill the uncles. But these uncles are protected by their own spirits, and the evil directed against them falls on their relatives. This is how this man died. Yes," he emphasized, "the medicine-men are very bad, and we have no use for them!"

This is, in truth, the objectionable side in the condition of a medicine-man. He is influential, feared, respected to a certain extent, receives abundant gifts from his fellow natives, but he is not loved, nay, he is strongly disliked. He may win the gratitude of patients who believe they have been cured by him; but he is always considered a dangerous person, who may at any time turn against his best friends and cause their death, either willingly and by witchcraft, or even unwillingly by the inadequate protection of his spirit. He is aware of this feeling, too, and though he generally disregards it, it weighs at times heavily upon him. He then wishes that he had never become a sorcerer. But it is too late; to renounce his profession, he would need courage enough to withstand the general discontent of the people, who, though they dislike the sorcerer, firmly believe that they are in need of his services. To them he is a necessary evil. To abdicate would be to incur the popular disgrace, and there are few Ten'a who have the strength to do so.

As has been said, the medicine-man does not choose his own spirit, but he is chosen by him. There is a vocation, a devilish calling to the craft, which one may disregard but cannot make for oneself—at least, according to the Ten'a notions. Some, indeed, are naturally predisposed to the calling. A peculiar deformity, which singles a man out of the vulgar crowd, is a sign of vocation. Thus the cross-eyed, the cripple, the lame, the sterile women, are more apt than others to be called to the devil-craft. Thus, for instance, Tirénka (Ti'henka), a famous shaman of the Kayar Indians, mentioned by Dall (*Alaska and its Resources*, p. 205) under the name of Tékunka, had a sort of an appendix, probably a superficially located cyst, about the size and the form of the thumb, hanging from his breast. Several whom I knew were cripples, and the two medicine-women with whom I am well acquainted are sterile.

The calling to the profession is by the finding of a *karunih* (ka'hunih), which invariably happens in this way. The predestined individual, as yet unaware of his election, has a dream. The circumstances seen in the dream may vary. To some the dream will picture their roaming in the woods and finding the *karunih*; to others, it will be likewise a walking through the forest and meeting a nice-looking boy, who will ask them whether they would be glad to possess præternatural powers, or some similar happening. The next day, the dreamer, generally filled with hopes and excitement, starts rambling through the woods. If he sees an animal, he will pursue it, but he will be led by circumstances, which do not depend on him, to a place which he recognises at once as the one he has seen in his dream. He looks around; perhaps the same boy who spoke to him in the dream will be there to help him; anyhow, without much effort, he notices, at the foot of a large tree, a blue flame covering a round space about the size of a common plate, say eight inches in diameter. He draws near, and there he beholds the *karunih*, small round bodies like beads, of the size of salmon-eggs, *i.e.*, about as big as a pea. They are of all colours, from twelve to twenty in number, very seldom more, their number being in proportion of the power of the connected devil. They seem to be alive, moving and dancing in a circle around the blue flame, passing again and again before his fascinated eyes. He generally hesitates for a long while; for there is nothing more irresolute than a Ten'a, and he knows that it lies within him now to answer or not the call to the spirit's friendship. He may leave them and go his way; and I know one who boasts of having done so. Generally, though, he is glad of the find, and determines to pick it up. He takes the first bead that he can catch, lays it on the palm of his left hand, applies the tip of his right fore-finger on it, and, making a strong act of his will—or imagination—he wishes for a certain specified power connected with it, saying, for instance, to himself, "This will give me the power to call the game and bring good luck on the hunt." He then looks for a sign that his wish is granted.

If he sees, for instance, an animal coming out from the woods, be it a rabbit, a grouse, or even a vulgar mouse, he knows thereby that he has his wish. He then puts back the grain and picks up another, which he holds in the same way, saying, perhaps, "This will give me power for calling or sending away devils." Whereupon a mysterious shiver passes through his whole frame, and he becomes aware that he has the desired faculty, and thus he proceeds to wish over each and every one of them. If some wish is not granted, the warning of acknowledgment fails to come; then he has to hold the bead and try another wish, until he strikes the right one. The reason of this is that not all spirits have all powers, and, according to sound philosophy, no one can grant what he has not. He may happen to wish for things which are beyond the power of the particular spirit with whom he is contracting. These are not granted, of course, and he must hit on the proper ones. There should be but little difficulty in this, because the cycle of wishes is always about the same. When he has passed all the grains over, he gathers them all and places them carefully in a small skin pouch, or, in our civilised days, in a small brass box, generally an empty box of Winchester primers. He now carries the amulet around with him; he does not fear the loss of it, for he knows that, if it happened to be lost or stolen, it would find its way back to his pocket without any more effort than a wish on his part. He is a medicine-man.

Such is the ceremony of investiture. As may be noticed, it is not done by mortal hand. It is all under the immediate guidance of the spirit, and one must acknowledge that for rude savages the fake is a good one, well combined and ingeniously put up. A spirit is attached to, literally *tied to* (*ro tadlerun*) the *karunih*, and this becomes the familiar spirit of the new medicine-man. The man generally does not see him. The spirit may have good reasons to abscond, as had the veiled prophet of Khorassan; but the fact is, that the medicine-man, without seeing him, is aware of his presence and feels the benefits of his protection.

When he needs to exercise his supernatural powers, the shaman takes from the pouch or the box (in a solitary place away from the indiscreet looks of the profane), the *karunih* which is fit for the purpose. He must know them all individually, and remember their destination, or else he runs the risk of a conspicuous failure. He drops it into a cup of water and swallows it. Never mind where it goes, it will be found again in the box, as soon as desired, and while the *karunih* is in him he will perform as a full-fledged priest.

As to the word *karunih*, it applies to the whole collection as well as to each grain in particular. Ten'a words, unless they designate persons, have no special form for the plural; the verb that governs them only changes its form. Hence, when one grain is meant the form for a singular object is used, with the same word *karunih*; when the whole collection is spoken of, the form for a plural object is used, the word *karunih* remaining the same. The etymology of the word is very obscure to me. The root *nih* which seems to be the main part of it, has a very general meaning, signifying *action* or *power*.

Although a medicine-man, as such, is considered to be above the common people, his ordinary life and his daily occupations in no wise differ from those of his fellow tribesmen. He hunts and traps, fishes, chops wood, works, just as they do. The consequence is, that by these means he earns as good a living as any other Ten'a. He does even better, on this score, than the average of them, because he is generally smarter. With what accrues to this from the exercise of his præternatural powers he has always plenty. His gains from this source always come to him as gifts. An Indian, it is true, never gives but to receive, and an Indian gift always turns out to be a *contractus in nominatus* of the kinds *do ut des* or *do ut facias*. But the medicine-man never requires anything as pay or salary for his services. He renders his services only after having received a gift, but it is a gift, and a gift it must be. The action of making a present to the medicine-man to secure his help is expressed by a special word *uskŭn*, derived from the root *kŭn*, fire, and which would mean literally, I set fire to, I burn. A few examples will sufficiently illustrate the process, and offer a general view of the shaman's work. The most common occurrences are the foretelling of future events and the healing of diseased persons. The former is always at the disposal of the greedy and covetous sorcerer, and these are the majority; the latter is accepted by any shaman when the opportunity offers.

To work out some profit from his knowledge of future events, a shaman generally proceeds in this way.

He takes notice that one or other of his neighbours and friends is in possession of some desirable article, as a fine blanket, or a valuable gun, or a new cooking stove. He comes to the owner, or to some of his relatives whom he knows to be thorough believers, and confidentially lets out that he has had sad intelligence communicated to him, concerning the said person, and this he discloses, as it were, reluctantly; the unfortunate man is doomed to die within a certain space of time, say, for instance, before the next spring. Others indeed will go at it in a brutal way, and say that they will make him die before the spring. But this rough way of dealing with the matter is exceptional. The news, of course, brings great consternation to the whole family, to whom it is speedily imparted. The person concerned begins to think of some valuable present to offer to the sorcerer, that he may avert the impending calamity. He generally chooses the best thing he has, and is pretty sure to hit on the coveted object, which being offered to the medicine-man and accepted by him, will set all things aright. In consideration of this gift—for it goes under no other title—the shaman will either perform solemn incantations, or, by a mere act of his will, commission his familiar spirit to save the threatened life. The doomed one does not die, the power of the great medicine-man is enhanced, and he is liable to receive more gifts from other members of the family, as tokens of their gratefulness for his valuable assistance. As one can see, the process is simple enough, and it works admirably on the credulous and timid Ten'a.

Similar dealings have been attributed to sorcerers of the Hawaiian Islands, with this peculiar feature, however, that the medicine-men of those Islands are skilled in the manufacture of poisons, by which they contrive to bring about the fulfilment of their predictions. The Ten'a fully believe that their own shamans can obtain the same result by means of their devils. But there is no one fact known to me that would offer a ground to the supposition that they can poison their victims. It may have been the case in olden times, but nowadays, as far as I know, they have no knowledge of poisons nor of any way of preparing them. Moreover, if it happens—and the case begins to be not uncommon—that the person whose death is announced disbelieves the prediction, it remains without effect. I have seen two notable instances of this. The one happened last winter, at Koyukuk Station twenty miles above Nulato. An Indian woman, married to a white man who is trading at this post, was the object of such a prediction. She and her relatives were in great anxiety, but the white man, whose consent she knew was needed to dispose of her or his property, absolutely refused to gratify the medicine-man's impudence. She fell sick, no doubt from the fright, and I was called upon to interfere and encourage her failing spirits. She finally was persuaded to try and overcome her fear; the fatal period passed and though rather unwell, she is still alive.

The other instance took place in the winter of 1901. A native, who claims to be a half-breed Russian, though I am convinced he is a full-blood Ten'a who was only adopted by a Russian convict, was living at a small village called Koyékasten, some twelve miles above Nulato. A medicine-man came down from the Koyukuk River, and made to him the dreadful disclosure that he would surely die before the ice would break on the Yukon. "Hold on!" said the other, "do you know to whom you are talking? I am the son of a white man, and you have no business to tell me such nonsense. I know what this means. You are after my new blanket, but you won't get it, and I won't die either." The shaman went away, shaking his head in an ominous manner, and refused to say a word more on the subject, although the relatives were anxious to hear some particulars. The wife of the doomed man was the most affected, but he stood it bravely. Of course he neither died nor even fell sick, and during the winter of 1902 he was relating the fact to me, in presence of many who had witnessed it, and triumphantly added: "Here now I am, as hale and hearty as ever. It is one year since that happened: I am not dead, and I still have my blanket." This man's name is René Koltsik, and, if he is not a half-breed, he is surely worthy to be reckoned as one.

During the spring of the same year, 1902, I witnessed another instance of disbelief in the shaman's foreknowledge which it may not be uninteresting to quote. I was spending a week in the same village, Koyékasten, lodging, as all travellers do, in the house of a native. My host was a simple-minded, good-natured fellow, who two years later shot himself in a fit of discouragement or insanity. His wife, much older than he, was the ruling power, not only in the house but also in the village, and still is very influential in the upper tribe. She is an ex-medicine woman, formerly held in great repute as such, who had given up the profession in order to become a member of the Church. After a long probation

I had finally admitted her to the Sacraments some days before. She had therefore two reasons to disbelieve: the one, her newly professed faith, and the other, her knowledge, personal and experimental, that the whole shamanship is an imposition. They were both, husband and wife, busily engaged in completing their preparations for the spring hunt, polishing guns, loading shells, sewing a tent, etc. An old medicine-man, Kapsul, entered, and, as customary with travellers and passers-by was welcomed with a substantial lunch. When he had finished, he said a few words, which I did not understand, in a low tone and departed. My host and his wife looked at each other, as in surprise, for half a minute, then the woman began to laugh. Cicero has observed, of old, that one could hardly see how haruspices could look at each other without laughing. She said to me: "Did you notice his last words?" "No," said I. "Well," she replied, "he made a prediction. He said that we would not go to hunt this spring." "And what of it?" I enquired. "It means," she went on, "that either we shall be prevented by some accident, or at least that we will be unsuccessful." "What are you going to do?" I insisted. "Oh!" said the woman, "I know all about that! We shall start in two days, and be as successful as we usually are, God so willing. I know about it, believe me." They went and made a good catch, so good that she was in a hurry to inform me of it, and as soon as they reached a telegraph station, on their way back, she sent me a message stating that they had killed five deer, seven beavers, and I don't know what else.

Such instances as these are by no means the common rule, and to each of the above mentioned I might oppose about twenty in which the Ten'a credulity paid a generous tribute to the medicine-man and his devils.

The healing of the sick is the other ordinary source of revenue to the shaman. He does it in various ways. He may just take a cup of water, blow into it, and give it to the patient to drink, who feels instantly relieved. A case of this kind happened in the latter part of the winter of 1905, at a village situated six miles below Nulato, and known as Nikulikakat. A young woman, Olga Kats, a *primipara*, was in the pains of labour. As these were unusually severe, she sent to Nulato for some medicine, which I gave to the messenger, instructing him how she should use it. She did so, but as the result was not instantaneous, accounted it null, and called in the medicine-man. He gave her a cup of water to drink in which he had blown, and immediately she was delivered. When she related to me the fact, I felt almost sorry that I had given her anything at all, but I could never persuade her that the first medicine had contributed more than the second to the desired result.

The solemn performance is much more showy, and well calculated to impress the imagination of the natives, who, whenever they are under an excitement, get altogether out of their wits.

The medicine-man is not generally asked to perform. The invitation or suggestion is done covertly, in a mysterious and indirect way. A relative, or a parent, of the sick person goes to visit the shaman. He brings along with him a present of some kind, say a sack of flour, or a beaver skin, or a blanket, which, upon entering the house or tent, he lays in a corner. He then proceeds to converse on commonplace topics, which he brings gradually to bear on the sick person's condition. This he describes with all particulars, generally with colossal exaggerations, equally emphasizing his own grief over the sufferer's ailments. When this is done conscientiously, and perhaps many times repeated over and again, he waits for the oracle. The medicine-man may answer simply that nothing should be feared, that the disease will not prove fatal, and send him back reassured. In this case he is supposed to work the cure without more ado, by an act of his will, directing his spirit to do the job. Of course, he keeps the present; though, if the patient should die, he would be bound in strict duty to restore it, or its value, to the one who offered it. These people being constantly sick, all the year round, from one complaint or another, this simplified process has to be frequently adopted, for a too frequent repetition of the grand incantations would be exhaustive to the medicine-man and probably also weaken the faith of the believers: *ab assuetis non fit passio*, as the scholastic philosophers say.

Or, again, the shaman may think it proper to give the full performance. If so, he warns the one who has prompted it (by giving the present) that the case is a difficult one, and that he will have to go and attend to it himself. The time is appointed generally for that very evening, and all the village is informed, one person by the other, in mysterious undertones, that the incantation is about to take place. A sort of awe pervades the place. A supernatural influence seems already to hang over it.

When the time is come, the believers, one after another, repair to the sick man's house. They do not walk to it openly, but stealthily, as it were, singly or two at a time; neither do they go in many at once, but few at a time. When a sufficient quorum is gathered the medicine-man sets to work.

For what follows, I feel bound to declare, though it may be of little moment, that I have never been an eye-witness of the scene. No medicine-man that I know of would venture to perform in presence of the priest. But the Rev. Father Ragaru, in the early years of his stay at Nulato, once had an opportunity to gaze at the scene, whilst standing on the outside by an open window. It is mainly from his description, together with a few details supplied by natives themselves, that I have drawn up the sketch.

The patient is laid upon a bed, in a corner. The audience are squatting all around, along the walls of the cabin. The medicine-man is in the middle. They begin, the shaman leading, to hum a plaintive tune, the voices being gradually raised to a louder, but not very loud, utterance. After a few minutes, the medicine-man, covering himself over the head and shoulders with a blanket, begins a sort of dance, keeping time with the tune, which he sings all along, his voice practically covering the humming of the audience, which sounds as a sort of an echo to it. His motions, slow at first, gradually become quicker until he works himself to a regular mad dance. Perspiration runs freely over his whole body, his face, distorted by effort, assumes a hideous appearance, saliva drops from his mouth, and his voice, tired by the continuous yelling, becomes hoarse. Needless to say, the excitement of the assistants is not a whit less than his own, and only the greater because it is kept under control. The patient has to be very sick indeed if he does not feel the influence, and if his imagination and credulity are not roused to the utmost. This may go on for one, two, or even three hours. Finally, when the shaman thinks that enough has been done in the way of incantations, he makes more and more frequent stops at the bed-side, pretending to make great efforts at extracting something from the patient's body. Once, twice, three times, perhaps, he fails in his attempt. The sick man groans with pain under the squeezing hand. The medicine-man exhorts the assistants to further efforts; the music of the chorus redoubles its plaintive accents, and eventually the spirit has to yield. The sorcerer, by a supreme effort, has extracted the spirit. He holds it with great effort between his closed hands, and goes along the row of the beholders, putting to them the uncanny question: "Is there anyone who will volunteer to take this spirit into himself, and thus save this poor man's life? Who will do it? Will you? or you?" etc. They all shrink from the task, and a dreadful silence is the only reply. He has then two ways of disposing of the weird burden. He may say: "There is no one! no, not one! Then I take it myself: let it come in my body and work evil to me. I shall save my friend, even at the risk of my life!" Whereupon he generously applies both his hands to his chest, and gets the spirit into himself. A noble deed, which is bound to deserve the grateful admiration of all present! But he will not always play this grand scene. More often he simply throws the spirit into the fire, or outside, through the door or window. This was the way it went when Father Ragaru was watching the performance. The sorcerer came to the window to despatch his captive spirit into the aerial spaces, when he unexpectedly beheld the missionary's head laughing at him through the window. He lost all self-control: "The priest! the priest!" he exclaimed. An indescribable confusion followed. The lights were put out, and the audience skedaddled in all directions, as though the real spirit had carried them along.

After the performance, both the doctor and the patient generally need rest. If the latter is at all curable by this method, he ought to begin to get better. In the cases which came to my knowledge, however, I may say that the patient generally felt much worse on the day following. If he fail to recover, the medicine-man is expected to return the gift he has received, for it was not given him to attempt the cure, but to effect it. This practice is so constant, that the Ten'a, at first, expected that the white physicians would conform to it. An American physician, Dr. W. Jennings, who wintered at Nulato in 1898–1899, used to attend to the natives during his stay. He rendered his services free of charge, whenever I assured him that the persons concerned were poor and unable to pay, but requested a fee of $5 from those whom I pointed out as able to bear the expense. Once he treated the child of a native medicine-man for typhoid fever, but, in spite of his effort to save her, the girl died. Her father expected to get back his $5, and came to me for the purpose. As he is, however, a sensible fellow, we had not much trouble in making him understand that the white man's doctor works on a different principle from that which guides the Ten'a, and he willingly waived the claim.

A medicine-man who has cured a sick person generally imposes on him an abstinence of some kind, which may be temporary or last his lifetime. It will be, for instance, to abstain from anything hot, eating and drinking only cold or cooled food and beverage, or to abstain from a certain kind of fish or meat, etc. These are scrupulously observed. There was at Nulato a young strapping fellow, whom I frequently hired for work whilst building the school-house in 1899–1900. He was called *Neraila* (Ne'haila), a corruption, I understand, of the Russian form of Michael. He had been once cured of some complaint by a medicine-man, and consequently had been enjoined to abstain from a peculiar kind of fish, very palatable indeed, which the natives call *telebĕga*. As we had to feed our workmen, and *telebĕga* was plentiful, the Brother in charge of the kitchen generally gave them a dish of *telebĕga* for supper. Neraila would never touch it. His companions, some of them strongly inclined to disbelief, as young men mostly are now, laughed at it, and mocked him. But nothing shook his constancy. At last the kind-hearted Brother took pity on him, and cooked a separate dish for the man when he had to give the forbidden fish to the others. Poor Neraila did not have to wait very long, however, to be freed from his obligation, as death released him during the summer of 1900. It is easy to understand that, by this practice, the medicine-man obtains a stronger hold on the minds of the people. They are thus trained to the habit of obeying him and following his directions. Even those who have no such restriction imposed on themselves, if they see others bound by them and keeping them carefully, get accustomed to the idea, and consider it as a matter of course that it should be so.

Besides these common practices, which are still kept up by the medicine-men, they had, in former years, other occasions to display their powers for the benefit of their fellow-men, and their own. Some have fallen or are falling into disuse. I shall mention, however, the calling of fish, and the performance of wonderful tricks, as these are now one of the most ordinary topics of conversation among the Ten'a.

Of the first, *i.e.*, the practice of calling the fish or the game, something is still kept. Even now there are few Ten'a who will start on a long hunt, or set to work during the salmon run, without giving a bribe to the medicine-man, or at least promising him a tithe or commission on the catch. The sorcerer has not to perform any extraordinary conjuration, but just directs his spirit to give help, and if the catch is good, obtains a goodly addition to what he may get himself by his own exertions, thanks to the spirit.

Whether there existed in by-gone days a regular process for calling the game, I am not aware, but such a practice uniformly prevailed for the fish to be called to run at the regular time. Many have described to me the performance, some claiming to have been eye-witnesses of it. They invariably add that the shamans of this day have no power to compare with those of the past, and it would seem as though the old superstition was near to die out. One can detect in this a feeling of impotence, which tries to keep to old traditions in order to assume some appearance of power and strength. They cannot fail to realise that the medicine-man's doings will not stand a severe scrutiny; they see the whites turning the whole fake to ridicule; they hear what we all have to say about it, and, giving it up, as it were, for a desperate case, they fall back on the past times, about which they relate all that their imagination suggests, there being no contradictory evidence that can be produced. It is not to be supposed, however, that they are conscious of their lying in this matter. Their mental condition is similar to that of one of those convinced "hot-air peddlers," as the miners call them, who after having repeatedly gone over the same wonderful adventure, finally come to believe in it themselves.

The calling of the fish, then, is thus described by the Ten'a. Towards the spring the people began to feel anxious for the next summer's run. The provision of dried salmon from the preceding year beginning to fail, they were desirous of having a good catch during the coming season. The medicine-man was at hand. Having sufficiently prepared the people's mind, by much talking and discussing the eventualities of the forthcoming salmon run, he gathered all the folks in one large cabin, chosen for the purpose; he commanded them to keep a Ten'a wake in the place, no one being allowed to leave it, even momentarily, until his return. If any person would presume to do so, it was sure to cause the shaman's death; and, subsequently, his own life would be lost. The sorcerer then dressed up, for he had a long journey to accomplish, under the waters, within the short lapse of one night. He put on a parkie, the native jacket, not open in front, made of the guts of the beluga or white whale, perfectly water-proof, pants equally water-proof, made of seal-skin submitted to a special tanning process (with ashes), and boots of the same material. These boots, commonly known as "water-boots" in this district, are still in use among the Ten'a, and the whites have adopted them also, on account of their standard qualities. The two other articles are no longer used by these people. The hood of the parkie being fastened tightly around his face, and the parkie itself well secured by a belt of raw hide, he put on his mittens, and having renewed his warnings to the people, he descended the slope to the river, escorted by two assistants, whose privilege it was to help him in getting in and out of the water.

The water-hole, an opening in the river ice from which the native women daily get their fresh-water supply during the winter months, had been enlarged for the occasion, so as to allow a man room enough to get in. It was to be the starting point for the shaman's trip. Into it he descended, with the aid of his faithful seconds, and they, well clad to stand the crisp cold of an Arctic winter night, had to keep watch at the hole, waiting for his return. Meanwhile, he was travelling at a ghost-like rate to the place where the salmon, in large bands, were spending their winter. Many a wonderful sight did he see in these excursions, many a thing hidden from the profane did he learn in his conversations with the dumb inhabitants of the deep. He treasured up information of all kinds, knowledge and wisdom were imparted to him; so much, indeed, that several times, when I was trying to argue with some native over the Ten'a superstitions, and he was brought to bay, he finally had recourse to this answer: "All those reasons may be satisfactory for you, who know only what is written and printed in the books; but our medicine-men know much more than that. They go under water and talk to the fish. There it is that they acquire the knowledge of these things which you cannot know because they are not written." To such a convincing reason there is, of course, no reply. Towards the dawn of day the medicine-man came back. He climbed out of the hole, the assistants having been careful to prevent its freezing by removing the new surface-ice as soon as it formed. He was thoroughly soaked, very cold and very tired. He was taken up to the cabin for refreshments, told of the success of his embassy to the powers of the fish kingdom, and received not only congratulations, but more substantial evidences of the general satisfaction. The assistants had also a share in the presents, and this may account for their never letting out any indiscreet revelation that might have brought suspicion on the genuineness of the venture. Nowadays, however, the shaman no longer goes to call the salmon, and still these well-meaning fish continue to swim up the rivers every year, as well as if they responded to the yearly invitation. We should draw an inference of no small moment from this fact; a Ten'a won't.

As a display of power, without any particular purpose, but always sure to be repaid by a shower of presents, the medicine-men used also, in former times, to indulge occasionally in exhibitions of wonderful feats, such as any sleight-of-hand performer accomplishes to amuse an audience. The practice having fallen into disuse, I am limited to the people's traditions for my information, and everybody who knows the Ten'a is bound to consider it a very questionable source. A few instances may prove to be of interest.

A shaman of Rodokakat ('Hodokakat) was wont to fly in the air, as often and as long as he wished, on the condition that no woman saw him whilst he was on the wing. If one had looked at him he would have gone out of sight, far beyond the clouds, never to see again his native country. This he barely escaped once when a woman, who had not been warned that the gentleman was in his aeronautics, happened to come out of her house and to look up to the sky. There she beheld him, and the sudden upward start which he made was enough to warn her of the peril. She closed her eyes, stepped back into the cabin, and it was not till after a long while that the sorcerer came, through what herculean efforts one may easily imagine. I had these facts from the shaman's son, Nicholas Surarlol (Su·ha‘hłoł), a man now about forty-five years of age. He was a small boy still when his father died.

A certain medicine-man at Kodilkakat, on the Koyukuk River, used to put aside his head, before falling into a trance, during which he held intercourse with the spirit world. I would venture to suppose that the bystanders lost theirs rather than he. His apparatus consisted of two spruce trees, which had grown close to each other, there being, perhaps, a distance of eight feet between the two; they were about forty feet high. He gave orders to the people to lop them, sparing only a bunch of boughs at the top of each. Such lopped trees are still used among Ten'a to mark the site of a graveyard, a village, etc., because a traveller can notice them from afar. At the top of these, just below the branches, a cross-piece was fastened from one tree to the other, over which passed a long strip of raw hide, long enough to hang to the ground on both sides. One end of this he tied into a slip-knot, and inserted his head in the noose. Four or five men pulled the other end and thus hoisted him up to the cross-piece, where he hung in the air. The rope was made fast at the foot of a tree, and, while the believers were gazing in awe at the ugly sight, the body was severed from the head and fell to the ground, the head remaining at the top of the structure. The senseless, headless body would lie on the ground for several hours together. His soul was then journeying in spirit-land. It all ended by the head falling down too, and reuniting itself to the body so perfectly that no trace of the separation could be seen. He had a tragical end, for he never came to from one of his trances. In vain did his admirers wait for the reviving to take place; it failed to occur on this particular occasion, and they had to bury him, in two pieces, head and body disjoined. Hence he is now spoken of as "the one whom we hanged," *mel ketsetlkelen.* Fifteen or twenty years ago anybody could have pointed out the two trees, which were still standing at Kodilkakat. Now they have disappeared.

Other shows could be commemorated here, but hardly deserve more than a passing mention. Shamans allowed themselves to be shot at with a rifle (which they themselves had loaded, or allowed another man to load), dropping down as dead and afterwards jumping to their feet, making an infuriated run, and finally coughing and spitting out the bullet. Others covered an empty dish-pan with a piece of drill, raised it toward heaven, and when they put it down it was found filled with powder or shot or gun caps. Another one took the stars from the sky and laid them on the floor of the cabin before his wondering admirers. He must have been very careful to put each back in its own place, unless, perhaps, he be the one who is answerable for the loss of one of the Pleiades.

If there be any truth in these facts, they would prove that the medicine-men in the old times were skilful performers, a qualification which their actual successors lack conspicuously.

There is also on record a famous prophecy set forth by a medicine-woman from Tozikakat, a camp about seven miles below Tanana. She predicted the coming of steamers, some fifteen years before any had come to this country, and announced the coming of missionaries, giving a summary of the "law of heaven," which they were to proclaim. But this prophecy does not stand examination, and the first investigations show it to have been made up after its accomplishment. It is just possible, however, that the coming of steamers, and even of missionaries. would have been foretold by some of the whites who came to the country with the telegraph exploration party in 1867, the prophecy being assignable to that time or thereabout.

With such and similar predictions, the medicine-men obtain a very creditable reputation among their fellow Indians. Of course they are liable, as any other Ten'a, to experience a foreboding of some kind, when, for instance, strangers or travellers are to arrive, when game is to be caught, etc. But these forewarnings, which generally consist in an unusual sensation, as an itching of the forehead or leg, etc., or a sneezing, or swallowing particles of food in the windpipe, are an everyday occurrence, by no means restricted to medicine-men, but happening also to old women, or in fact to anybody. They are not therefore within the scope of this sketch.

It might be enquired, now, what sort of lives the medicine-men live, with so much devilry about them. To this I can reply that, in their private lives, they are neither worse nor better than the average Ten'a. Their profession seems to exercise no special influence on their moral character. They are generally smart, somewhat crafty, but not to a degree that would greatly transcend the ordinary. Some are very wicked, but others, on the contrary, are benevolent and genial. One, who died in the spring of 1905 at Narardotiłten (Naʻhaʻhdotiłten), a village some sixty-five miles above Nulato, was one of nature's gentlemen, if there be any. Another, Makayitar (Makayitaʻh), who died on March 27th, 1894, was a declared atheist and an open enemy of religion and missionaries. His death occurred in circumstances that did no credit to the standing he had taken as an opponent of religion. It was after he had blasphemed late in the night, challenging Almighty God, "if he only existed," to put an end to his life, that, in the early morning he went out for the necessities of nature, and, as Arius of old, died in this act.

A shaman is always supposed to die in the same way as he makes other people die, *i.e.*, his soul is eaten up by a spirit. I could obtain no particulars as to how this eating is done, but it is always the first and the last saying which one hears about a dying or dead medicine-man: "A spirit is eating up his soul," they will say: or "his soul was eaten by a spirit." Such is the summary of their funeral orations.

One might be curious to know whether they themselves believe in their supernatural powers, or merely carry on a system of imposition. I believe that some are really convinced that they can do something, at least, to relieve the sick, and such was the case with the Narardotiłten medicine-man whom I have just mentioned. But against this solitary instance I was personally acquainted with four Shamans who acknowledged their utter powerlessness. Two of them are still alive, and one even on his way to conversion. I must be excused from giving their names. They both assured me that they make it a point always to return the gifts they receive for their performances, because they say they would feel as though they were stealing if they were to keep them. Their wives concurred in the same assertion. But among Ten'a, two witnesses are not always a sufficient guarantee to the truth of such a statement.

The two others died in 1900. They were held in great repute and had perhaps the most intelligent and bright eyes that I have ever seen. One of these, Say'o, was himself the son of a medicine-man. The other, called Nedzaratiya or Rudzota (Nedza‘hatiya, ‘Hudzota), had, I think, more clients at Nulato and in the neighbourhood than all the other medicine-men put together. Father Ragaru assisted them during their last illness, and they both owned to him that they had never believed in their magical power, that they had been anxious for a long time to get out of their awkward situation, but were morally constrained to persevere in it by the fear of incurring universal reproof, if they had given it up. People, they alleged, would have considered them as mean and stingy fellows who refused to help the sufferers when they had the means to do so. They both authorised the Father to make this declaration public.

I may add that the medicine-men have absolutely nothing to do with real medicine. The only medical practices which I have witnessed among the Ten'a are puncturing, and the preparation of spruce-tea, and of a decoction of a bush resembling juniper. The puncturing, which consists in thrusting a small pointed blade through the skin previously seized and held up between the thumb and forefinger—just as whites do with the hypodermic syringe—is their method of blood-letting. It is performed by women, generally old women, who have had much practice. The two decoctions alluded to are prepared by anyone who wishes to use them. The medicine-man never interferes with those, not even as much as to advise the patient to recur to these natural remedies.

APPENDIX I.

FOREIGN AND NATIVE WORDS USED IN THIS PAPER.

To comply with the request formulated on p. 86 of *Notes and Queries,* I subjoin a list of the foreign words used in the foregoing pages, each of them being written in capitals, and accompanied with some remarks when these seem to be of interest or value.

A. *Words used by English Speakers and which may be considered as Anglicized.*

INGALIK, *pron.* in'galik; *pl.* Ingaliks.—A term of contempt by which the Ten'a were designated among their Eskimo neighbours, and which was adopted by the Russians. Probably from the Eskimo: *Inkēlik, pl. Inkĕlit,* the lousy ones, from *inkek, pl. inket,* louse-nits.

INNŌKO, *pron* ĭnŏk'ŏ.—Also heard as *Unoko* and *Unoka*. The maps have constantly the spelling: Innoko. The name of an affluent of the Yukon, from the south side. The word is not Ten'a, as the variety in pronunciation shows, and has no meaning in the Ten'a language. The native name for this stream is *Łurno*, generally pronounced *Łuron*, by a usual transposition, and stands for *łukatno*, *i.e.*, fish-river, from *łuka*, fish, and the suffix *tno*, meaning *river*.

KALTAG, *pron.* kăl'tăg.—A trading post on the Yukon River, about forty miles below Nulato. From this point an overland route, known as "the Portage," goes to the sea-coast, whence a winter trail exists to St. Michael. The post is so called from the Indian name of a locality situated opposite to it, on the south bank of the Yukon, and termed *Kałtor*, viz., amongst the king-salmon, from *Kat*, king-salmon, and the suffix *tor*, of time or place, meaning among or during.

KOSEREFSKY, *pron.* Kŏs'ĕrĕf'skĭ.—A Russian name, more or less disfigured, said to mean Leather-Village. The place is located about 240 miles below Nulato on the north bank of the Yukon. It is the last village of the Ten'a, the next one, Paimiut, situated twenty miles further down the river, being a settlement of Eskimo.

KOYUKUK, *pron.* kŏ'yŭkŭk.—The name of a large affluent of the Yukon, on the north side. It empties into the Yukon about twenty miles above Nulato, and a trading post, known as Koyukuk Station, is located on the Yukon, within two miles of, and below, the confluence. This trading post has absorbed the Indian village which used to be about a mile above the actual site. Various etymologies have been proposed for the name, all unsatisfactory.

NULATO, *pron.* Nōōlă'to.—Trading post dating from 1838, situated on the north bank of the Yukon, in 158° W. long. and 64° N. lat. The name is from the Indian word *Nulartor*, viz., among the dog-salmon; from *nulara*, dog-salmon, and the suffix *tor*, among or during.

PARKIE.—Ivan Petrof spells this word *parkee*, and adds: "a Kamchatkan word; upper garment of fur, with small head opening and sleeves, varying in length" (*Compilation of Narratives of Explorations in Alaska*, Washington, Government Printing Office; 1900, p. 108). He should not have omitted to mention the hood and its trimming of thick long-haired fur, which forms a prominent feature of it.

TANANA, *pron.* Tăn'ănă.—A large affluent of the Yukon on the south side. Within two miles of the confluence, on the north bank of the Yukon, is the trading post and settlement formerly called Tanana Station, now termed Tanana. A commercial company has tried to change this name to Weare, in honour of one of its principal shareholders, and the military post stationed there is called Fort Gibbon by the War Department. Hence the same little spot is called by five names, viz.: Tanana, Tanana Station, Weare, Gibbon and Fort Gibbon, which is as confusing as it is unnecessary. It has, besides, its Ten'a name, viz., Rorododetłatłten, meaning: "the place where the wood has been chopped," the lumber camp as it were. The word Tanana is probably of Ten'a origin.

TOZIKAKAT, *pron.* Tozïkä'kăt.—A native camp, some seven miles below Tanana. The word is Ten'a and means the mouth of the Tozitno or Tozi River. This stream is an affluent of the Yukon, on the north side, and the camp is located at its mouth. A river is designated in Ten'a by its name, followed by the suffix *tno* (sometimes shortened to *no*), which means river. This suffix is replaced by *dlot*, to designate the head-waters, and by *kakat*, to designate the mouth. Thus, the river just mentioned is called Tozitno; its head-waters: Tozidlot; its mouth, *Tozikakat.* Similarly we have for the Rotol River; *Rotoldlot, Rotolno, Rotolkakat*, etc. In the lower dialect *kakat* is pronounced *tsakat* and *tcakat, i.e., tshakat.*

B. *Words not Anglicized.*

The following having no orthography sanctioned by use, I write them according to my ordinary alphabet, and I add the transcription in the alphabet given on p. 173 of *Notes and Queries.* In my alphabet:

1. The apostrophe (') stands for an aspirate, very slight indeed, but perfectly distinct, which occasionally comes near to our *h* in *hand*, etc. A fair approach to this sound can be obtained by making a very slight pause between the letters which it separates. It is not represented in Professor Max Müller's alphabet.
2. The stroked l (ł) stands for the palatal or lateral l, well known to philologists. It may be the sound represented by *l* in Professor Müller's alphabet, but I cannot make sure of it.
3. The r stands for a sound which varies according to the localities, from the sound of English r in *car*, to the sound of German ch in *Buch* (or the r *grasseyé* of the Parisians). The soft sound is heard in the upper tribes, from Tanana down to Nulato: the harsher one prevails below Nulato. This is evidenced in the forms, Anglicized, *Nulato* and *Kaltag*, where the same suffix *tor* has become *to*, where the r was pronounced soft, and *tag* where the r was pronounced hard.
4. The ḥ stands for German ch in *Ich, i.e.*, 'y, in the alphabet of Professor Max Müller.

1. *Proper Names of Persons.*

Ten'a names are individual. The name given to a child is commonly the first incorrect or outlandish word which he or she pronounces, or which is said about him or her. To this word is often added the suffix *nō*, probably connected with the root *no*, life, for the females; and it was once customary to add the root *to*, father, for the males. But this latter practice has fallen into disuse.

DAT'ON.—According to alphabet, p. 173 of *Notes and Queries*: dat on.

KAYINELE‘AN—Kayinelan. May mean: "he looks as though he were beaten, overcome," or: "you have overcome him for your own advantage."

KAPSUL, kapsul.—Apparently a nickname given by the Russians. The man's genuine Ten'a name is: Makayusla me-to.

KATS, kats (the *a* is long or protracted)—probably identical with the root *kats*, to stare.

KOLTSIK, kolstik.—Probably a Russian word, disfigured.

MAKAYITAR, Makayita*r* *or* Makayita‘h.—"He throws him down upon it," or some similar meaning.

NEDZARATIYA, Nedza*r*atiya *or* Nedza‘hatiya.

NERAILA, Ne*r*aila *or* Ne‘haila.—Said to be a corruption of the Russian form of *Michael*.

RUDZOTA, *R*udzota *or* ‘Hudzota.

SAYO, Sayo.

SURARLOŁ, Su*r*a*r*loł *or* Su‘ha‘hloł.

TIRÉNKA, Ti*re*nka *or* Ti‘hénka.—Probably a disfigured Russian name.

TSAIKA, Tsaika.—Seems to be: *tsai ka*, "I want tea." *Tsai*, in lower dialect, *tshai*, means tea—a Russian import; *ka*, denotes desire.

2. *Proper Names of Places, etc.*

KAYAR, Ka‘ya*r* *or* Ka‘ya‘h.—Literally: village, or the village. A stretch of lake and timber country, opposite Nulato, on the south side of the Yukon, where the lower tribe Ten'a used to have several villages. They still keep up the practice of going there for a month or two every year, during the freezing, and some years also during the breaking of the Yukon. Spelled *Kaiyuh* on the map of Alaska, printed by the United States Geological Survey (Preliminary Edition, 1904).

KODILKAKAT, Kodilka‘kat.—Mouth of the Kodilno or Kodil River, an affluent of the Koyukuk, from the west side. The Kodil is spelled *Kateel* River on the map of 1904.

KOYÉKASTEN, Koy*e*kasten.—A small village some eleven miles above Nulato, on the north bank of the Yukon; also called, Koyekasron. The final *ten* designates *the place where* or *the time when*; the final *ron* is a preposition meaning *at*. Thus, Koyekasten means the place of the clay; Koyekasron means at the red clay. There is a deposit of clay in the neighbourhood.

NARARDOTIŁTEN, Na*r*a*r*dotiłten.—A large native village about sixty odd miles above Nulato, on the north bank of the Yukon River. The name means the place where we carry the canoe, viz., a portage, and alludes to an overland portage to the lakes, whither the natives used to carry their canoes. When the telegraph stations were established by the Signal Corps of the United States Army, Lieutenant George Gibbs endeavoured to have this name adopted for the station there located and spelled it *Nahochlatilten.* It went under that name from 1901 to 1904, when the appellation being found decidedly too inconvenient, was changed to *Louden,* the one actually in use. The natives of Narardotiłten are remarkable above all other Ten'a for the elegance and accuracy with which they speak their language, as well as for their distinct and harmonious pronunciation.

NIKULIKAKAT.—A small village situated six miles below Nulato, on the north bank of the Yukon. Its people have their summer camp at the mouth of the Nikuliratno, a small affluent of the Yukon, whence the name. But the winter village is two miles above the mouth of the creek.

RODOKAKAT.—A middle-sized village, formerly very large, about four miles below Kaltag, on the north bank of the Yukon. The name is a generic term meaning the mouth of a river. A small affluent joins the Yukon there and is also called by a general term: Tokotno, the inland creek.

ROTOLNO, *R*otolno or 'Hotolno.—An affluent of the Yukon on the south side. It joins the main river about twenty-five miles below Kaltag, at Rotolkakat. opposite a small native village called Madzatetseł'ihten, and very inappropriately surnamed by the whites Lower Kaltag.

TARTSENIBANTEN, Ta*r*tsen*i*banten.—A once populous settlement, now reduced to two cabins, on the point of an island in the Yukon River twenty miles below Nulato. Opposite the camp, on the north bank of the Yukon, a cabin has been erected for the use of the mail carriers, and is known as Half-way Cabin, from its being mid-way between Nulato and Kaltag.

3. *Other Words.*

AŁTA, Ałta.—A familiar spirit. Probably from the root-suffix *łta,* male.

ESEYEN, Eseyen.—*Verb intr.,* I conjure, I witch, expresses the performing of incantations to call or send away devils. Root: *yen.*

KARUNIH, Ka*r*uni'y or Ka'huni'y.—The amulet or talisman of the medicine-man. It has a spirit connected to it.

KOTNI, Kotni.—Literally: something speaks, the "something," represented by the indefinite pronoun *ke,* being a spirit. Root: *ni,* to say.

MEL-KETSETLKELEN, Mel-Ketsetłkelen.—The one whom we hanged, literally, the one around whom we tied something. *Me* is the object-pronoun of third person, *him; l* is a preposition meaning *around; mel,* him-around. *Ke* is the indefinite pronoun, *something; tsetłket,* we tied, first person, plural of Past indicative of the verb *etłket,* I tie. This Past regularly implies that the object remains tied at the time of the utterance; if not the same person of the verb would be, *tsere'łket.* The final *en* is a suffix having the force of a relative pronoun, and corresponding to the one who or whom.

NEKEDZALTARA, Nekedzalta*r*a or Nekedzalta'ha.—Spirit or spirits. Probably means the quick moving or the quickly moved thing.

NIŁ RO TENATADLERUNTEN, N*ił* ro tena tadle*r*unten or Nił ro tena tadle'hunten.—The place where we are tied to each other. *Nił*, reciprocal pronoun; *ro*, preposition, to: *ten'a*, object-pronoun of first person plural, us; *tadlerun*, third person singular (passive) of the form of actual duration from the past indicative of *detłrun*, I tie; *ten*, the place where.

SEN, Sen.—A spirit, especially as connected to a *Karunih*.

SHAMAN, sa'man.—A Kamchatkan word for sorcerer or medicine-man (Ivan Petrof' *Compilation*, etc., p. 108); never used by the Ten'a amongst themselves, but only when speaking to foreigners.

TELEBEGA, tel'ebega.—A small white fish, 8 to 10 inches in length somewhat oily but quite palatable, common in the Yukon.

TEN'A, Ten'a.—Man. Differs from the object-pronoun *tená*, us, by the accent and the aspirate '.

TEYEN, TEYENEN, Teyén, téyenen.—Sorcerer; medicine-man. If necessary, when speaking of a medicine-woman, the word *soltan*, woman, is prefixed: *soltan teyenen*, a medicine-woman. See above: *esoyen*.

TSONTEYE, Tsonteye.—Spirit. Literally, the bad thing: *tso*, bad, *neta*, third person singular, present indicative of *está*, to be, the verb of circumstance; and suffix *ye*, the thing which. Spirits, in the language, are not persons but things, as the animals.

USKUN, Uskun.—I prompt by paying, I bribe, as it were. Evidently from the root *kun*, fire, which in this peculiar form would have the force of I intend to burn, I mean to set fire to.

APPENDIX II.

WORDS BELONGING TO THE MEDICINE-MAN'S CRAFT.

The following words are here appended as illustrating to some extent the belief of the Ten'a concerning their medicine-men and the practices indulged in by these. The list is by no means a complete one. Although it would be necessary to possess a fair knowledge of the language in order to understand thoroughly the force of these and similar expressions, they may afford, even to the uninitiated, an insight into the way the Ten'a think and speak about the craft.

In writing these I use only my ordinary alphabet, believing that its value may be easily estimated from the comparisons made throughout Appendix I. The words are arranged in the alphabetical order of the roots, although the reader might be induced to think differently from the appearances. It would require too much of a grammatical dissertation to explain here why. I consider the root *taih*, for instance, to be the fourth form (iv) of the root *la*.

ba, to swim.

dza no-kodebaihten, a cavern from which a spirit is accustomed to come forth and jump in the water.

daⱦ, motion not under control of the will, has 12 different forms, of which I quote only:

i. *ido no-karaneyedaⱦ*, I enter a house. Expresses that the subject who enters is a multitude, viz., a medicine-man with spirits.

iv. (*tar*) *nekedzaltara*, spirit.

dzatar, the dead-dance, or the dance by which the dead are supposed to be brought back to life.

dzatar kelek, the song of the dead-dance.

no-to-karaledar, a spirit jumps into the water.

no-to-ketⱦar, I cause a spirit to jump into the water.

ma ka dza esetar, I dance for him to be brought back to life.

v. (*lih*) *kade ni danetⱦlih*, I strike (him) with poverty, I reduce (him) to want.

me-ni raⱦ-danetⱦlih, I strike him with lameness, I cripple him (by magic or witchcraft).

'ih, to see.

ro do-rodanetⱦ'ih, I foretell (foresee in word) the death of—*death* is not expressed but understood.

'ih, stealth.

'aba ko ro-denarast'il, I guard against disease, I dodge sickness—*aba*, means disease, sickness, sore, etc.

'ih, to eat.

me nokobedza es'on, I eat his soul—*nokobedza*, soul.

tena nokobedza yi-rei'ih, they eat our souls.

kaih, cramp.

a-ketlkaih, I cause a cramp to, I cramp.

koih, to run.

se yi no-kelekoih, a spirit invades me.

kun, fire.

uskun, I prompt or bribe a medicine-man; I propitiate.

udasokun, I burn an offering to.

kudasokun, I make burnt-offerings.

la, to put or place. Has twelve forms, as root *daⱦ*. The following only need be mentioned:

i. *dza tseleyar*, we dance to bring the dead to life.

ⱦe tesla, I put in the fire, viz., I make a burnt-offering of (object plural).

ⱦe teslaih, the same, in frequentative form.

me yeka kanaga delaih, in it words are put, a wireless telephone, by the devils; said to have been used by medicine-men to communicate with each other when at a distance.

iv. (*taih*).

nen ko no-letⱦtaih, I bring back to life (a dead person).

se yi no-zek-keletaih, a spirit invades my body.

ta-meⱦ-siⱦtaih, I am entranced, my soul being carried downwards.

ya-meⱦ-siⱦtaih, the same, with upward motion.

v. (*'oih*).

dza runes'oih, I become a medicine-man—literally: I show out a thing (abstract), I set forth an abstract object.

no-netł oih, I bring back to life (a dead person). Perhaps from root *'oih,* to go.

lit, mental actions or changes—the frequentative form is *lek.*

me tse yini-teslek, I turn my mind to it; the object being a spirit, the result will be to have him come.

ro ni yini-neslit, I help by magic or witchcraft.

a-ko runetłlit, I reduce to beggary.

teyenyu lonna sor ni yini-ralek, many medicine-men are helping me.

łta, male.

sa ałtaa ara mor ni yini neslet, I helped him (cured him) by means of my spirit.

ma ałtaa ketelatłran, another spirit has killed his.

raba ałtaa rono toruno ta-rałtloga, ei teyenyu; whilst their spirit is alive the medicine-men do not die.

ma ałtaa keten nekedzaltara yo'on, another spirit is eating his.

łu, ice.

nen yar luu, the underground ice, which is supposed to be everywhere under the earth surface. The medicine-men in their trances often visit this nucleus of ice unknown to our scientists.

nar, become.

naradenitna, ghosts.

ni, to say.

tse desni, I say to him, meaning: I make him a present to him to help me by magic, practically the same meaning as *uskun.*

nih, action.

resnih, I move as a spirit or ghost; expresses the motion of spiritual beings.

karaninik, the thing (*i.e.*, spirit) has come.

sa—karaninik, a spirit has come into me.

me tse ratatłnih, I send (a spirit) to him.

nekedzaltara mo ro kerélaye runinik, a spirit having no equal has come.

'o, position or location.

ketaka rotal'o tse rora aba yi-zilaih, we (*i.e.*, they) are sick in a way which is beyond (our) power.

rat, to flee.

yar degarat, I invade his place by my spirit; this is done by sending the spirit under ground to stop beneath the place where the other man is resting or sleeping, by which, first the spirit of the sleeping man, and then the man himself, is made to die.

ulegarat, I send my spirit to pass underneath him, not stopping as in the preceding case; the result is the same.

nekedzaltara me yeko utdleraŧ, tseyero to-tŧlon, a spirit passed under him, and thus he died.

niŧ yar zileraihtŧ (frequentative), we invade each other's place.

tŧan, to abstain.

kota, nelekure intŧan, henceforth abstain from hot food.

tor, to disappear, to vanish.

no-rotŧor, ketetŧtor, I cause things to disappear suddenly.

ro-detegetor, I cause myself to disappear.

'uihtŧ, to swim, in a crowd.

dza no-kele'uihtŧten, a place from which spirits swim out.

yen, to conjure.

mor eseyen, I perform incantations against him or in his favour.

tso-tŧakaye a-egeyen, I invoke wicked spirits.

Appendix III.

The following is a sample of Ten'a folk-lore, which has been thought to have enough bearing on the subject treated, to serve as a further illustration of Ten'a thought about the matter; written with my ordinary alphabet. An interlinear word for word translation is given with the text; a current rendering follows.

Nen ma-atŧniken.

The Cripple.

Kayar	rulan.	Tseyerotse	teyenen[1]	me-ten'a	yu'an	ledo,[2]	keiŧkanen.[3]
A village	there is.	And	a medicine-man's	child	apart	stays,	one abstaining.

Raŧte	salno[4];	tsaraŧte	tŧetaŧ	royan	sodeŧ,	sonaŧ.
and	we have started on the hunt;	and	at night	only	we shall go,	we shall go hunting.

Nenkoroten'a	lon.	Ataraŧte	yi-meŧ-tseinoletik	to-roron	ni ranino.
People	many.	Presently	we shall sleep *i.e.*, to the end that we may sleep, for a sleep.	in order that	they have stopped.

Aruroyeŧ	ronten:	"Mor ni	norno-ye	rulan-te	ŧo	'é	meŧ	ara
Then	suddenly:	"That after	which you hunt	where it is	is	this	sleep	by

lordzet-ten?	taka!	tŧetaŧ	sonaŧ;"	zelerus	toruno
where you lie down?	up!	at night	we shall hunt";	we shout	whilst *i.e.*, whilst she shouts.

---

[1] It is understood immediately by a Ten'a hearer that this medicine-man is the cripple mentioned in the title. The connection is not so plain to us.

[2] Stays apart, viz., during the month, or the year, which follows the first appearance of the catamenia. Hence it becomes evident that she is a woman. Nothing else marks it in the text.

[3] Abstaining. During the separation just mentioned the women practise abstinence, very strict during the first month, less so for the remainder of the first year.

[4] The first person plural is used for an indefinite subject, as will appear often in the following lines.

tena	ka	ra'oƚ	Sonaƚten	tƚetaƚ	royan	ronaƚ.
us	after	she walks.	Where we shall go hunting	at night	only	they go hunting.

Aruroyeƚ	ronten	zelerus,	inte	ra-do-roderénik.	Ta-rar'ana	root
Then	suddenly	we shout,	but	it stopped.	Wherefore	slowly

talyo	Tƚetaƚ!	Aruroyeƚ,	root	ra'oƚ	toruno,	teken
she began to walk.	Night!	Then,	slowly	she goes	while,	a stick
			while she is going slowly.			

ade	kotse	dodetlihtƚ[1].	Noyeka	rotse	zelerus,	itƚak;
herself	before	she puts to the ground.	Underneath	from	we shout,	it is heard;
ahead of herself			from underground.			

aruroyeƚ	ko	teken	ade ni rodalenen.	Tseyerotse,	kar	ade	yeƚ
then	this	stick	disappeared.	And so,	back	herself	with
					she started back on		

no-taƚletset;	tseyerotse	kar	no-taƚleyo.	Na-radoƚ;	te-to	tse
she jerked	and so	back	she began to go.	She goes back;	her father	to
a sudden					to her father	

no-taƚleyo.	Aruroyeƚ	ronten	kun-kat	rotse	na-radoƚ;	yuni
she began to go.	Then	suddenly	a fire-place	towards	she is going;	above
			towards a fire-place.			

ronte	rodalkun.	Aruroyeƚ	tseyitƚ'osk	itƚak.	"Ketƚ
unexpectedly	there is a fire burning.	Then	we sneezed,	it is heard.	"Food

no dini![2]	aƚoo	ronten te-duruniayu!	nen ma-atƚniken	me-ten'a
you foretell!	in vain	may you not say!	the cripple	's ch

se	no	denirudetlis[3]	tse	rono-te-dini,	rola;"	raƚte
me-around		may she get black-faced	this	you foretell,	perhaps;"	and
around me						this is

ko	kun a-didonen	te-denitsen.	Tse	neleket-tsen:	"Atƚeye ƚo	nekedzaltara
the	one sitting at the fire	what he says.	And	(she) being afraid:	"This is	a devil

ko le-deniye,"	ni.	Tseyerotsaraƚte	oih	yatsetse
the thing that speaks,"	she says.	And upon this	(her) snow-shoes	in the opposite direction

ni no niƚtatƚ,	tse	ten	roralka	réyo,	tseyerotse	yuur	no-taƚleyo.
she directed,	and	the trail-alongside-of		she went,	and thus	over there	she began to go.
		out of the trail but along it.					

Ko nekedzaltara	an ulyo,	tse	ro	no-tadlekok,	te-to ro	no-ilekok.
This devil	off she passed,	and	up	she began to run;	her father—to	she ran back.
					to her father	

---

[1] This could be understood in two ways; 1st, as I have translated, to say that she feels the ground ahead with a stick; or, 2nd, that a stick appears walking alone by itself, ahead of her.

[2] One who sneezes always addresses thus the cause of his sneezing, supposed to be a devil; in this he formulates a wish. Here the speaker expresses first the usual wish for food, then he emphasises it by wishing that it may not be frustrated, then he expresses another wish for the unfortunate girl.—See next note.

[3] May she become black-faced. This implies the wish that she may starve, as the Ten'a think that long fastings render their skin darker than it naturally is. Their long fasts generally occur in the spring-hunt, when the game happens to be scarce, and it is a fact that they come back with a sun-burnt complexion. But this is traceable to the very strong sunshine and the want of soap more than to their starving. I could never notice that those who had had plenty to eat were less sun-burnt than the others.

Tseyerotse	ronten	me-to	yin-do-rodaltlet[1];	tseyerotse	nekedzaltara
And suddenly		her father	was angry at the words;	and	the devil

to-ltlon,	ko	teyenen	yelatłnan[2]	kâ	te-yilor.
died,	this	medicine-man	killed it	as	it were.

Tseyerotse	te-to ro	taldo.	Ketła	kā	ta-ratalta,
And so	her father-with	she began to stay.	Food—in want of		they began to be,
	with her father		in want of food		

tseyerotse	mén-kat	rotse	te-to	tatłror.	Łuka	oko
and so	a lake	towards	her father	she carried on a sled.	Fish	in-search-of
	towards a lake				in search of fish	

tseterézon	iru.	Tseyerotse	me-to	rałte	yero	naltan
we dug holes in the ice,	in vain.	And so	her father		thus	lay down

ko	baaba	kāt.[3]	Tseyerotse	noy'a-leł	ra-do-no-detadle	kuł,	tse
(in) this	food	want of.	And so	a beaver-skin	she brought into	the house,	and
from want of food							

tłe	yederéłkuł.[4]	Meł-inadleten;	dza nilet;	tłi	niyo.	Aruroyeł	ronten
in the fire	she put it.	She went to sleep;	she awoke;	out	she went.	Then unexpectedly	

yutłi	men-kat	łu	kala[5];	ko	łu	niłkatse	toko	ledak.
down the bank	(in) the lake	ice	none;	this	ice	on both sides	on the beach	is gone.

Noko	diyo;	łu	ledak.	Łuka	kéłoke	ulnik	te-to	tse	to
Down the bank	she went;	the ice	is gone.	Fish	one	she took;	her father	to	up
							to her father		

no-tałleyo	tseyerotse	tłé	yederéłtlak,	ko	łuka.	Ko	ye	not
she started back;	and thus	in the fire	she put it,	this	fish.	This	its	flesh

ulnik,	te-to	lo	yeréłdatł;	tseyerotse	me-to	nenoko	no-tatłnik.
she took,	(in) her father's mouth		she thrust it;	and then	her father	stood	up.

Rotł	noko	diton;	łuka	rotł katse	to-no-tadlerok.
A sled	down the bank	she brought;	fish	the-sled-on	up she began to bring repeatedly.
				on the sled	

Me-to	no-ułlezut[6];	ko	soltan	rałte	tałleyen:
Her father	recovered;	this	woman	on the other hand	began to practise the medicine:

te-to	kadeyor.
her father	she became as.

TRANSLATION.

In a village, the daughter of a medicine-man was set apart for the days of her abstinence. The whole population started for the hunt; they were to go only during the nights on this hunting expedition. They were many. They had just camped for a sleep, when someone exclaimed, "What! is this the place where you will the game you are looking for? What means this going to sleep now? Get up! it is at night that we must go"; and, so saying, she was coming on their track. They had to go to the hunting ground by night.

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[1] Viz., at the relation of what had happened to her.

[2] Killed it, but did not destroy it, as appears further. He was dead, "as it were."

[3] This want of food is the work of the devil which has been, as it were, killed by the medicine-man. A Ten'a understands this at once, but we need a bit of explanation.

[4] Burning this skin, which is valuable, was an offering to the angry devil, by which he was appeased.

[5] This and the following happy events show the advantages of having propitiated the evil one.

[6] Recovered. This may mean from his temporary weakness, or even from his cripple condition.

Suddenly a shout was heard; then all became silent again. She began to walk cautiously in the dark, feeling the ground ahead with a stick. Another shout was heard coming from under the ground. She started back, whilst the stick vanished from her eyes, and she turned back. She was going back to the place where she had left her father, when she beheld a camp-fire ahead of her, on the way, and heard a sneezing. "A presage of food! May it be a true one! A presage, perhaps, that the cripple's daughter will starve whilst going around my abode," spoke the one who sat by the fire. Fear seized her: "It is a spirit that speaks," she said, and she turned her snow-shoes off in the opposite direction, and left the trail. Having passed the spirit at a distance, she started to run, and ran back to her father. When she told him what had happened, he was quite angry; so much that the spirit died, as it were, from the treatment it received from him.

She remained with her father. As they had nothing more to eat she carried him on a sled to a lake. They dug holes in the ice to catch fish, but they failed in their attempts, and her father was reduced to lie down from weakness. Then she brought a beaver-skin into the house and burnt it. She went to sleep, and, when she woke up, she went out. There was no more ice on the lake; it had all gone to the shores. She went down the bank; the ice was gone. She caught a fish, and went back to her father. In haste she put it on the fire, took some of its flesh and put it into her father's mouth. Immediately he raised himself from the ground. She brought a sled down the bank and began to go up and down bringing fish. Her father recovered, and she, in her turn, became a medicine-woman; she became what her father had been.

CHINESE METHODS OF CUTTING HARD STONES.

By W. L. Hildburgh.

The Chinese are exceedingly skilful in the cutting of hard stones, in the attainment of form as well as in the utilisation of the material, to the best advantage. This is to be expected, for such stones are very extensively employed by them, as personal ornaments by all classes, and for decoration and utility by the wealthier portions of their communities.

The commonest personal ornaments are bangles and ear-rings, which are worn by rich and poor, especially in the South, the differences in the values depend almost entirely on the natures, qualities, and colours of the materials used. The bangles are usually round, and most frequently are of circular section. The ear-rings are like small quoits, and are hung from metal pieces passing through the lobe of the ear.

In addition to these, there are, for the rich, finger-and-thumb-rings, pendants, amulets, buttons, belt-buckles, cap-buttons and peacock-feather-holders for officials, hair-pins and ornaments for women, cap decorations (principally small deities) for children, and the innumerable small pieces used in conjunction with metal, kingfishers' feathers, pearls, precious stones, and glass, in the construction of elaborate ornaments of various kinds. Larger objects are snuff-bottles, cups, tea-pots, bowls, vases, sceptres, water-pots for writing, ink-stones, brush handles, and a multitude of other articles of domestic economy, as well as purely ornamental pieces, some of which are of great size.

The stones principally employed are the various kinds of jade, crystal in its varieties (colourless or reticulated, amethyst, smoky, rose, green, blue, "hair," etc.), a number of agates and quartzes, and sardonyx; several others are occasionally utilised, including some of the less valuable varieties of hard stones. Their surfaces are treated in the manner considered, in each case, to bring out most effectually, to the touch as well as to the sight, the beauties of the stones. To most materials a perfectly smooth, highly polished finish, showing no traces of the cutting tools used, is given, but to others, such as fine white jade, a surface, like that which would be produced by a series of exceedingly light hammer-taps upon a smooth, stiff plastic material, is occasionally applied. A softness and roundness of line is valued, particularly in jade carving, but there is frequently to be found, even in jade, an extreme sharpness of detail, heightened by undercutting or by a slight concaving of the outer face, but thoroughly polished, which is even more difficult of attainment.

Only tools of the simplest character serve for these carvings, some of which are marvels of intricacy, delicacy of workmanship or beauty of finish. The cutting is done by iron fed continuously with wet sand, the chief tools being thin discs of different diameters, solid and hollow drills, convex- and concave-rimmed wheels, and hand-saws. (See Fig. 1.)

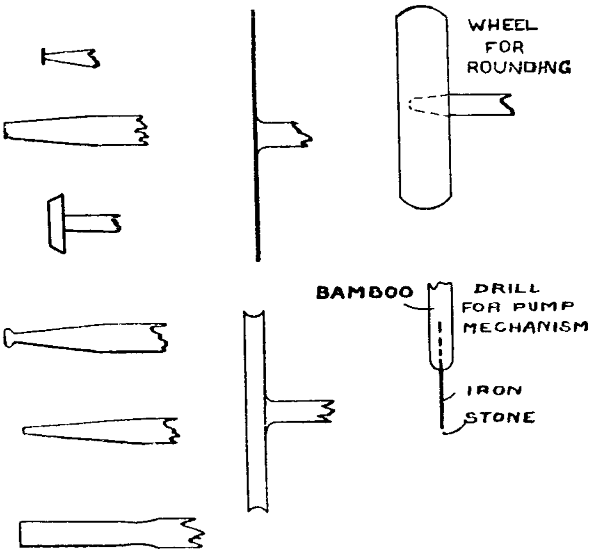

FIG. 1.—TYPES OF TOOLS.

An artificial sand is made, lumps of corundum—for example, at Canton — being pounded in an iron mortar with an iron pestle, and the crushed material graded by washing through several sieves, and, for the finest sizes, by settling. A valve of the fresh-water pearl shell is used for stirring, and to dip out the finest sand, for finishing, before settling. During working, the sand is held, in a lump, where the cutting edge will carry it continually into the part being severed. At Peking, according to Dr. Bushell,[1] four kinds of abrasives, increasing in power, are used: "yellow sand," quartz crystals: "red sand," garnets or almandin, for the circular saws; "black sand," a kind of emery, for various tools; and "jewel dust," ruby crystals, for the final polishing.

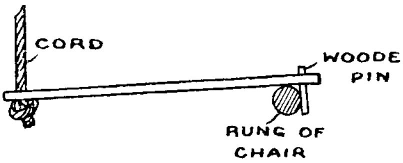

FIG. 2.—TREADLE.

Rotary motion is communicated to such tools as require it by a shaft worked by a pair of loosely hung treadles, to each of which one end of a cord is attached. A strap is given a few turns around the shaft, and is fastened to one of the treadle-cords at each end. As either treadle is depressed the strap pulls the shaft around, and raises the second treadle, which latter, being in turn depressed, rotates the shaft in the opposite direction, and raises the first pedal. Thus, the tool

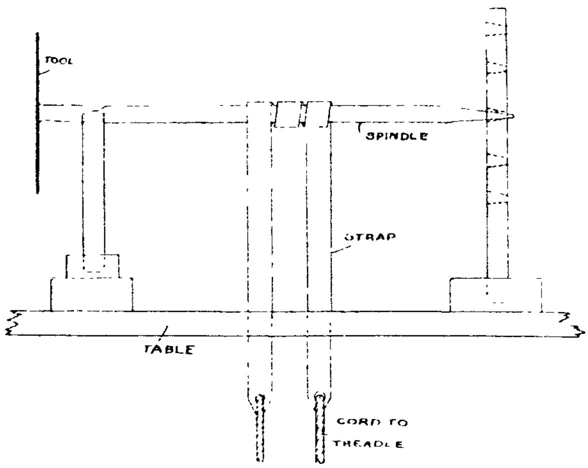

FIG. 3.—DEVICE FOR ROTATING TOOLS.

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[1] *Chinese Art*, p. 143, South Kensington, 1904.

receives a reciprocating rotary motion, not a continuous rotary motion. Each treadle has, at the end opposite to that to which the cord is attached, a peg on its under side, by which it hangs from a rung of the workman's chair. (See Fig. 2.)

The cutting discs vary from about a foot in diameter to a fraction of an inch, the larger ones serving for deep straight cuts, the smaller for finer work, for engraving and for finishing.

In cutting an object of ordinary size the workman holds the piece in his right hand, at the bottom of the disc, and, in his left, a lump of wet sand, through which the disc passes, against the farther side of the stone. The table is so arranged that the spindle carrying the disc can be shifted to the most convenient position, numerous holes for that purpose being pierced in the movable block of wood which upholds the end of the spindle. The spindle is supported at a second point by a small, flat block of wood, in a hollow of which it rests. (See Fig. 3.) Generally the tools are detachable from their shafts, being simply held rigidly in place by cement, but sometimes the whole tool and shaft is made in a single piece.

The larger sizes of drills are operated by the treadle, the smaller ones by a pump or bow mechanism. The smaller and medium size drills are solid, but the larger ones, to minimise the amount of material removed, are hollow, each being made of a sheet of iron bent circularly, with a small space between its ends; with these latter a cylindrical cut is made, the core being afterwards broken off and removed. By suitably arranging hollow drills a cylindrical cut can be made larger at the top than at the bottom, or *vice versâ.*

The principal steps in the cutting of bangles, rings, or the quoit-shaped pieces for ear-rings, are performed with these hollow drills. A piece of jade, for example, is cut by a large disc (practically, a toothless circular saw) to a level surface. Upon this are marked the outlines, in ink, of the various pieces to be cut from it, arranged so as to secure the fullest utilisation of the material, with regard to colour (which is generally unevenly distributed) and to the minimisation of useless scraps.

A hollow drill cutting, say, the outer circumference of a bangle, is prepared, and is set vertically in a multiplex drilling machine, while a thick block of wood, of the exact circumference of the interior of the drill, is cemented firmly to the area whence it is purposed to cut the bangle. The jade having been levelled, so that the edge of the drill is in full contact with its surface, the circular block acts as a guide for the correct starting of the cut. Other stones are set in position beneath the other spindles of the machine, each drill is surrounded by wet sand, and the cutting, for which strength, not skill, is required, and for which boys are often used, is commenced.

The multiplex machines, used particularly in Canton, a centre for bangles, ear-rings, etc., consist each of a number of vertical spindles, generally about ten, which, operated simultaneously from one pair of treadles, will make one circular cut per spindle. The number of drills used depends principally upon the sizes of the cuts; only when these are small, as for ear-rings, is the full capacity of the machine utilised.

The cut being finished, the various cylinders are removed from their blocks. Of them, the smaller will be worked into rings, ear-rings, or stoppers for snuff-bottles, or, if sufficiently long, perhaps into feather-holders for officials, or mouth-pieces for smokers. The small, irregular pieces remaining become beads, settings or embellishments for jewellery, seals, the tiny carvings used as additions to pendants, etc.

The wooden block first fastened to the cylinder intended for bangles is replaced by a smaller one, of the diameter of the interior of the bangle, and the cylinder is placed, in a multiplex machine, beneath a drill cutting a hole of that size. Upon completion the hollow cylinder is cut transversely by a disc, into two or three short cylinders, whilst its core is worked into rings, etc. The short cylinder passes to a workman who cuts, with a disc, an encircling groove near each end, afterward breaking the thin part with a hammer, so that the bangle is roughly rounded. The shaping is continued with a broad convex grinding wheel, and is finished on a narrow concave-rimmed wheel which gives a uniform curve to the outside. Finally the piece is polished by wheels, the first of iron, with fine wet sand, the next of wood, with finer wet sand, and the last of wood with a little nearly dry sand. At Peking, the final, and highest polish, is given to hard stones after the polishing upon wood, by a disc of leather, or of solid gourd-rind, dried, upon the edge of which a little extremely fine sand is occasionally put with the finger-tip.

Smaller pieces are made in a like manner, the difference being in the finishing. The quoit-shaped pieces for ear-rings are worked to size on the face of a small iron wheel having the form of one side of the completed piece. The engraving, or deeper decoration, is done with small discs, some sharp, some short cylinders, some short truncated cones; these last are for rounding the edges of deep lines.

The smallest drills, operated by a pump or bow mechanism, are frequently worked without sand. They are formed of a piece of strong, hard wire held in the end of a bamboo stick, and sometimes have a stone tip. For the drilling of the small holes in the very thin pieces used in jewellery, for which the small drills are mostly employed, the wire is very short, and the objects drilled by them are held upon pieces of wood, under water.

Larger drills are used to cut the holes for the saw-wires, in the making of fret-work pendants, pieces for decorative application, and open-work carvings. Still ones are used in the cutting and finishing of high relief, their ends being pointed, squared, rounded, truncated, etc.

Reciprocating, non-rotary saws, being much slower than the revolving discs, are employed only where the latter are inapplicable; that is, to fretwork and the like. Each consists of a bow of wood, about one end of which a number of turns of wire are taken, the wire then passing to a small nail or hook at the opposite end of the bow, where it is easily fastened or released. In some districts the saw-wire is single, but in others, as at Canton, it consists of two or more fine strands twisted together, and carrying the sand better than a smooth wire. A somewhat similar arrangement, for enlarging long holes, consists of several stiff brass wires, laid together and fed with sand, upon which the stone is rubbed forward and back.

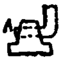
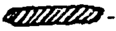
In operation, holes are drilled at the points where sawing is to begin, and the wire is passed through one and fastened to the nail at the end of the bent bow, which, expanding, straightens and tightens it. The workman places the stone against the front upper edge of his table, holding it, with a lump of wet sand behind it, in his left hand. The saw is driven with the right hand, the position of the stone being changed as becomes necessary, while the saw-wire remains always in contact with the table-edge.

For the cutting of large pieces, astonishing lengths of time are required, for, according to the workmen, from a year to eighteen months may be occupied in the shaping and finishing of an object no more than 3 or 4 inches in any dimension. Such a piece is not held as the smaller ones are while cutting, but is suspended by a long cord from a flexible piece of wood, relieving the workman of its weight, whilst leaving it free to be held in any position by the left hand.

The roughing out of an object is accomplished with discs and drills, and, when much material is to be removed, is a very slow process. Cuts, separated by from a tenth to a twentieth of an inch, or less, are made to the proper depths, and the slices are afterwards broken off. Then, by drilling, the deeper parts of the design, and the relief, are worked out, and the piece is finished by the use of the tools as previously described.

Large pieces are usually made by contract, the workman (or his master) taking the stone from a shopkeeper to whom an order has been given, and making an estimate as to the cost of working it to the required shape. The stone used is, of itself, generally of considerable value, though a proportion of objects is to be found, upon which many hours and great skill, have been expended in the treatment of a stone valued only slightly by the Chinese. Such objects are, in many cases, produced from a piece of cheaply-purchased stone by a workman in his spare hours, or in times of otherwise enforced idleness.

With these simple pieces of apparatus the Chinese cut even the most intricate objects. Ear-rings are formed of two or three linked pieces, each link an unbroken piece of jade, and the artist often makes, not simple rings, but flat or rectangular links pierced with an openwork design. Sometimes a chain and its pendant will be made of a single unseparated block, with links a quarter of an inch long and a twentieth of an inch in thickness. Or the artist will make a lacework of jade so delicate that it would seem that the mere pressure of the saw-wire would crush it before completion. Sometimes there may be found a button, perhaps a trifle over an inch in height, and less in diameter, carved in the semblance of a writhing dragon, or of birds or animals in the forest, the body of the dragon, or the branches and trunks of the trees, passing, nearly separated from the outer wall, into the interior of the block in a way that is almost incredible.

Other curious carvings are baskets, whose handles are movable, and pendants with centres which can be shifted, but not removed. The joints of the baskets, formed thus,  are made by the use of a hollow drill at A, which sets the handle free on one side. The pendants have a series of cuts driven at an obtuse angle from the centre, from each side, so that the two series meet, and set a -shaped piece free. This, fed with fine sand, and moved, wears smooth both its groove and itself. The pieces set free are generally circular, but, in at least one specimen, the artist has set free the entire pierced central portion of a long thin rectangular piece of pierced jade.

Snuff-bottles are amongst the most remarkable products of the skilful patience of the Chinese lapidary. For the mere cutting and finishing of the interior of one of these articles of luxury from ten to thirty days, it is said, are necessary, while for the decoration of the exterior another ten or fifteen days may be required. Oftentimes, in working an opaque material, the artist is unable to judge, except by feeling, of the extent of the flat ellipsoidal hollow, in the formation of which he is engaged through an aperture of perhaps an eighth of an inch, or a little more, in diameter.

The interiors of the bottles may be completed with almost the same precision and beauty of finish as the exteriors, as may be seen in crystal, clear agate, and other like stones. Generally, the thinner the wall remaining, the more highly is the bottle prized, not only because of the greater time and skill required, but also because of its lightness in carrying, and the greater advantage to which the material appears.

Though some snuff-bottles are circular in horizontal section, the majority are elliptical or oblong, and some are exceedingly thin and flat. Some typical sections are shown in Fig. 4.

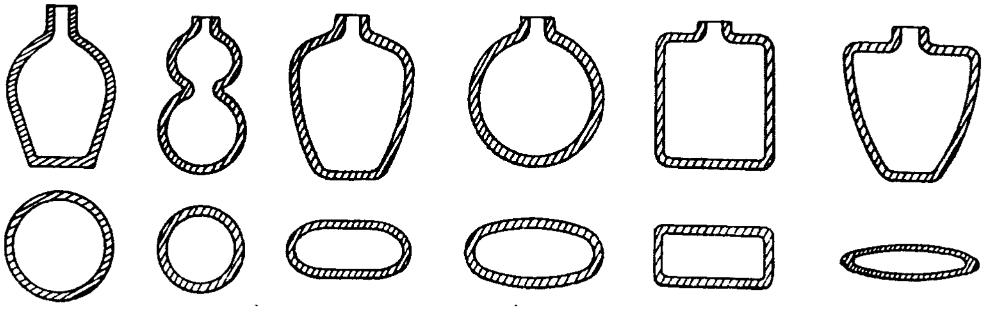


FIG. 4.

In making a bottle the exterior is first shaped, in order that any imperfections in the stone may be revealed, and removed, or utilised in the ornamentation, and the decoration is completed. This procedure is particularly necessary in the preparation of bottles of which the exterior is not regular, as in the case of many of those bearing cameos, for the making of which the Chinese may follow the irregularities of a coloured spot in the stone.

The first step of the hollowing is the drilling of a circular hole through the neck, to the depth of the cavity to be made, through which all the tools subsequently used are introduced. This hole is gradually enlarged to the shape of a flat wedge, by simple straight tools held at an angle to the axis of the bottle, which widen it at the bottom. Then tools of a special shape are introduced, and run at high speed in like manner to a drill.

These tools, of soft iron wire, up to about an eighth of an inch in diameter, are of various shapes (see Fig. 5), and are fed with a mixture of sand and water within the bottle. They may be described as hooks, mostly very long in comparison with their widths, and twisted out of a flat plane. The wear comes on the back of the hook, not on the point, and the cutting surface is generally about a sixteenth of an inch wide. Only one bottle is cut at a time, it being held in the left hand, and its axis and that of the cutting tool being kept as nearly as possible in the same plane though the inclination of the axes to each other is constantly changing.

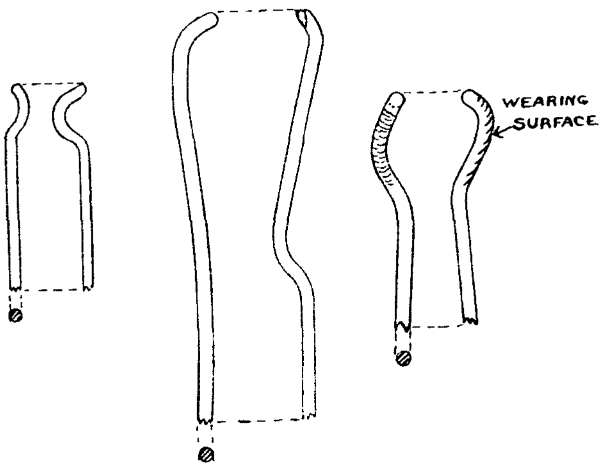


FIG. 5.—TYPES OF TOOLS FOR HOLLOWING SNUFF BOTTLES.

The longer tools are used for the sides, and the shorter for the upper parts and the corners. The same tools are used for cutting and for finishing, simply the quality of the sand being varied from coarse to fine. The neck orifice must be large enough and short enough to permit the axes of the bottle and the tool to make a considerable angle; that is, if long, the hole must be wide, if short, it may be very small. Some bottles are made with necks of ordinary length, but with exceedingly small neck-openings, but these have their openings widening at once instead of continuing cylindrical throughout the neck. (See Fig. 6.)

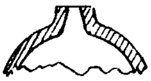


FIG. 6.

Sometimes bottles are made double, consisting of two separate bottles side by side, and joined externally but not internally. Others are made, to outward appearance, single, but with two orifices and two separate compartments.

In soft stones, and in amber, bottles are, apparently, sometimes made by scraping, instead of by the use of rotary tools.

NOTES ON A COLLECTION OF BRONZE WEAPONS, IMPLEMENTS AND VESSELS FOUND AT KHINÁMÁN TO THE WEST OF KERMÁN IN SOUTH-EAST PERSIA, BY MAJOR P. MOLESWORTH SYKES, C.M.G.

By Canon Greenwell, M.A., D.C.L., F.R.S., F.S.A.

With an Introductory Note by Major Sykes.

[With Plate XXI.]

Introductory Note.

I propose, in the first place, to give a brief account of how the collection came into my possession. For some years I had been holding the post of Consul at Kermán in South-east Persia when, in 1900, a Persian friend, the Governor of Khinámán, a sub-district of the Kermán province, situated some forty miles to the west of Kermán city, wrote me a most interesting letter. He informed me that, while trenching ground preparatory to planting a garden, he had come on a quantity of bronze and copper objects and that he hoped that I would come over and see what he had found. As the district was entirely unexplored, in addition to the chance of making interesting archæological discoveries, I accepted the invitation and reached Khinámán shortly after.

The find was made near the hamlet of Kákh, situated on the slope of a low ridge. Further south is a high hill, on which we saw the ruins of an important fortress, known as the Kala-i-Dukhtar or "Virgin Fort," and beyond, a huge gravel slope forms the northern side of a valley up which runs the main road from Kermán to Yezd. Owing to a fine stream of water, Kákh and the surrounding villages were evidently always of some importance in a land where cultivation depends on irrigation, and this theory is confirmed both by the size of the ruined fort and by important but more modern ruins. The only legend peculiar to the district is that Aza Mahán—the founder of Mahun under Noshirwán—was also Governor of Khinámán, and that, at the time of the Arab conquest, in the seventh century A.D., seven warriors mounted on bulls were sent to aid hapless Yezdijvid, the last monarch of the house of Sás-án.

To come to the actual collection, the long thin rods puzzle Canon Greenwell and myself. Persians, however, suggest that they were placed in the armpits of the corpses as sticks of the pomegranate are placed to-day. The bowls are also of considerable interest. The smallest one can be identified by the fact that most Persians use its identical counterpart to-day. It is, in fact, a pocket drinking vessel. As to the vessel with a spout it seems at least possible that it may have been a lamp, although rather deep.

I believe that I obtained specimens of everything that was found, except a silver carving which was melted down before I could rescue it.

This concludes anything that I can add to the able paper which Canon Greenwell has written, and I only hope that his paper may ultimately be of service in our efforts to throw light on the dim past of Persia.[1] P. M. S.

The weapons and other articles were found in the district of Khinámán, in the province of Kermán, not many miles west of the town of the same name, in the south-eastern part of Persia. They had been associated, as grave goods, with burials of unburnt bodies, which had gone entirely to decay, in a cemetery of no great extent. The graves, which were discovered accidentally, were situated at the foot of a ridge. There was no sign that a mound or any added earth had ever been placed over the graves, nor was there anything on the surface to indicate the existence of the burials beneath, which had been made close together. The graves, more or less square in form, which had been sunk to a depth of from 3 feet to 4 feet into the ground, had neither been lined nor covered with stones.

The discovery was made by ordinary workmen, to whose recollection Major Sykes, who only became acquainted with the find some months after it was made, is indebted for any facts which have been preserved in connection with the burials. They are but scanty and otherwise insufficient, but each grave contained, it is said, a large vessel of pottery and two pins of a metal, which appear to be, as were all the other metallic objects, constituted of copper with a small addition of tin, an inferior kind of bronze. Besides the larger vessels of pottery, which were too big to remove, two much smaller ones, well made and slightly ornamented, have been preserved; one of them, quite similar in all respects to the other, is illustrated. The larger vessels were of great size and destitute of any ornamentation. They much resembled the pots, now called in Persia *khom*, and were capable, like those in which Ali Baba and the forty thieves were hidden, of containing a human body. They were of a globular shape, somewhat elongated, standing on a flat bottom with a wide mouth. They measured about 4 feet in height and were 2½ feet wide at the middle. These vessels were probably the receptacles of the corpse, as was the case in burials in other parts of the world, as for instance in Asia Minor, Spain, etc. Nothing was found in them except some yellowish dust, all that was left of the interred body, supposing they originally contained one, nor in the graves themselves was any portion of human or animal bone discovered.

So far as is known no similar cemetery or burials of a like kind have hitherto been found in Persia.

It is impossible to over-estimate the interest and value of this discovery. This arises not only from the nature of the articles themselves, but also from the light it throws upon the early metallic stage of cultivation in that country, about which our information is very scanty.

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[1] Illustrations of the find appear in my "Ten Thousand Miles in Persia," in *Journal Anthrop. Inst.*, vol. xxxii, 1902, p. 341; and in *Archæologia*, vol. lviii, pp. 8-16.

Before giving a description of the various articles, it may be well to say something in regard to their purpose and use, as well in connection with the living as with the dead. The axes and spear or javelin heads are weapons of war or of the chase, and were placed in the grave in accordance with a practice which has prevailed largely over many parts of the Old and New Worlds, the belief that the buried person would require in an after life those things which had been necessary for existence in that which had already been passed through. The pins and armlets are personal articles connected with dress or ornament. The knives were for ordinary domestic use, but what was the purpose of the long thin rods with a curved termination it is at present difficult to explain. The bowls, which had no doubt been of use in the economy of the household, were probably the receptacles of food for the sustenance of the late owner in another world, and correspond to the vessels of pottery which in other countries fulfilled a similar purpose. The same use may be assigned to the smaller vases of clay, which most likely held liquid.

These vases, of which two have come into Major Sykes' possession, are of similar size and shape, and are similarly ornamented. They are globular in form, of thin fabric, lathe-turned, and apparently baked in a kiln. They have a short narrow neck, 1¾ inches high, which expands at the mouth to a width of 2 inches. Their height is 7⅝ inches, and they have a flat bottom 4½ inches wide. The ornamentation is confined to the upper part of the body of the base immediately beneath the neck and occupies a space of 2 inches in depth. It consists of three encircling bands, of a rather roughly-made zigzag pattern, which increases downwards in width from ⅝-inch to ⅞-inch. The bands are divided from each other and are bordered at top and bottom by a plain grooved line. The design seems to have been made by drawing a bluntly-pointed tool over the moist clay before it was fired.

Five bowls have been preserved, four of which are of the same general shape. They are made of hammered copper, and are, on the whole, somewhat globular in form, but varying to some extent. In height they range from 1¾ inches to 6 inches, and are from 3¾ inches to 6 inches wide at the mouth. They stand on a flat circular bottom, about 2 inches wide, from which, except in one case, the sides rise after the fashion of steps, from one to three in number. The fifth, which is 2½ inches high, and 3⅛ inches wide at the mouth, with one step at the bottom, is provided with a handle 2¼ inches long, having a channel along its length, which may also have served as a spout. The two knives are quite different in form; one, which has lost a portion at the end of the blade, is now 6 inches long and ⅞-inch wide, with a flat narrow tang, which occupies 1¾ inches of the whole length of the knife, and is prolonged down the blade in a flat rib ⅜-inch wide; the other, of very thin fabric, is in shape a narrow oval, 4⅞ inches long and 1⅝ inches wide, with a sharp edge all round it. Neither of them are very different from similar implements of the Bronze Age, which have occurred elsewhere. The two pins are very much alike in every way;

one is 7¾ inches long, the other 6⅞ inches. The head in each case is a flat circular disc, grooved round the edge by vertical lines, and having a round plain projection on the top. Immediately beneath the head are two grooved saltires, side by side, placed between two lines above and two beneath, the whole being in one case 1⅛ inches deep, in the other ¾-inch. The two armlets are penannular and quite plain, 3 inches and 2¼ inches respectively in diameter, and might have come from any country where bronze was used for such ornaments. The two enigmatical rods with curved ends are of about the same length, 18¼ inches and 18⅝ inches. They differ, however, in some slight particulars. The longest is round at the part which may be called the handle end, though it becomes square for the space of an inch at the end itself, where it expands a little, apparently by having been beaten out as a rivet would be when hammered. It is square in section, for a length of above 11 inches at the curved end, and finishes at the point of the curve in a cutting edge. The other is round throughout and expands at either end in the same way as does the first at the handle end. What these rods may represent it is difficult to say, but it is possible they may have been emblems of direction, control, and power, in other words, the shepherd's crook, and have been carried by or before the chief, the symbol of his authority over the tribe or community which he ruled.

The javelin heads are leaf-shaped, with a tang for handling, and are not very different from others which have been found in various parts of the world. One is 4⅞ inches long, of which the tang occupies 2⅛ inches, and 1⅛ inches wide, with a sharp rib down the centre of the blade; the other is 4¼ inches long, the tang being 1⅛ inches, and 1⅛ inches wide, with a flatter rib down the centre than has the first.

Of the various articles discovered in the cemetery the axes are the most important and noteworthy. It has not been possible to ascertain if any other grave goods were associated with them, with the exception of the large pot which had contained the body. They are described as axes, but it must not be understood that they were weapons or implements to be employed in war or for other useful purpose. The way in which the handle was passed through the blade precludes the possibility of their having served as cutting instruments, though one of the ends is to some extent sharp-edged. It is probable they were representative weapons made to be buried with the dead person in place of that which had been used by him in life, or, as is perhaps more probable, they were of a ceremonial nature, to be employed in processional rites, or to be carried as a mark of dignity before a man of rank and power in the community. In general form they are much alike, and are double-ended, with a hole for the handle about the middle, and a peculiar curve towards the narrower end. One end is curved, wide-spreading and blunt, the other end is much narrower and sharp at the curved edge. The larger is 7 inches long, the blunt end being 3⅝ inches wide across the curve, the sharp end 1⅝ inches wide. The socket for the handle, which passes diagonally through the blade, is nearer the blunt than the sharp end. The upper edge of the socket, which is ⅝-inch by ⅜-inch, appears to represent the open mouth of a lion; the lower edge, which is acutely pear-shaped, 1¾ inches by ½-inch, may roughly represent part of the body of the same beast. Both edges of the socket are bordered by a band of small round bosses. Between the ends of the socket is a sharp-pointed oval raised figure, divided along its length by a similarly shaped groove, parallel to the sides of the figure. It may be a representation of the human eye. Just above the pear-shaped lower edge of the socket is a narrow sharp-ended oval groove, which is perforated, at the end nearest to the sharp edge of the axe, by a small similarly-shaped hole. Immediately beneath the eye-shaped figure, on one face of the axe, is a small round hole drilled, in a gradually narrowing way, through into the socket. The edge of the blunt end of the axe is ornamented with two parallel bands of projections; the outer one consists of loops, which are joined at the top, and form a kind of wavy pattern, the inner one having a series of round balls similar to those which surround the edges of the socket.

The second axe, which is a still more interesting one, is 6 inches long, the blunt end being 3 inches wide, the sharp end 1½ inches wide. The socket for the handle, though it has not so diagonal a passage as that of the first axe, does not pass straight through. Each edge of the socket, the upper one being ½ inch by ¼ inch, the lower 1 inch by a little more than ¼ inch, is bordered by two bands of short, narrow oblong projections. Occupying the same position as that on the first axe is a similar pointed oval eye-like figure, which has a border of projecting oblongs smaller than those at the edges of the socket. In the same place as the opening through the blade in the first axe, and beneath the hind quarters of the grotesque beast, presently to be noticed, and close to the edge of the blade is a small oblong hole which perforates it. The edge of the blunt end of the axe is ornamented with a band of triangular shaped hollows, their base being towards the edge, within that and parallel to it is a narrow band of straight lines of vertical punchings. Parallel to and near to the lower edge are two bands of slightly inclining linear punchings, each bordered by a thin engraved line. Upon the upper band are two triangular figures filled in with crossing lines. The whole of these punched or engraved lines are rudely executed. Standing over the socket is a winged grotesque, which has a beast's head with open mouth, topped by a curved crest and having a beard. Opposed to this creature, standing on the curve of the sharp end, is a lion apparently roaring at his adversary.

It will be observed that on both these axes the lion appears in whole or in part giving a distinctive character to the design. The lion occurs as a prominent feature upon two axes which come from places which may be treated as within the same area of Asia. They differ, however, in more than one particular from those illustrated, more especially in their having been instruments for use. One from Hamadan (Ecbatana) in Persia, in the British Museum, has the socket for the handle made through the mouth and part of the body of the lion. The other from Van in Armenia in my collection at Durham, has the lion, which is being baited by two dogs, seated upon the socket. They are described and figured in *Archæologia*, vol. lviii.

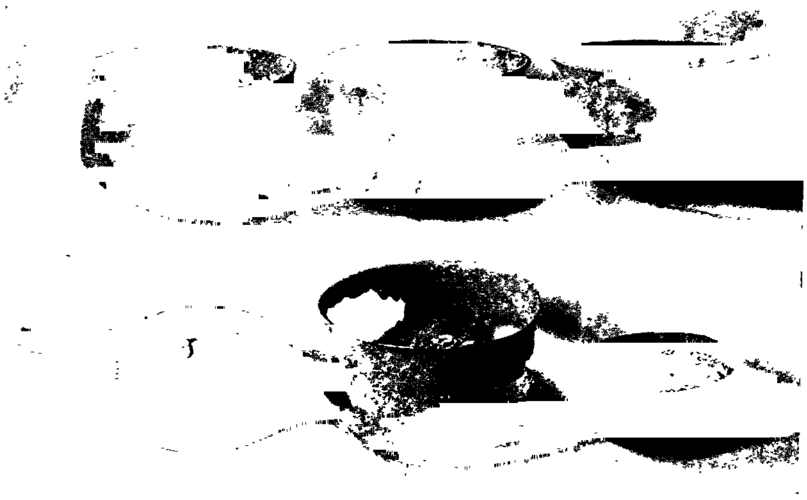

FIG. 1.—POTS.

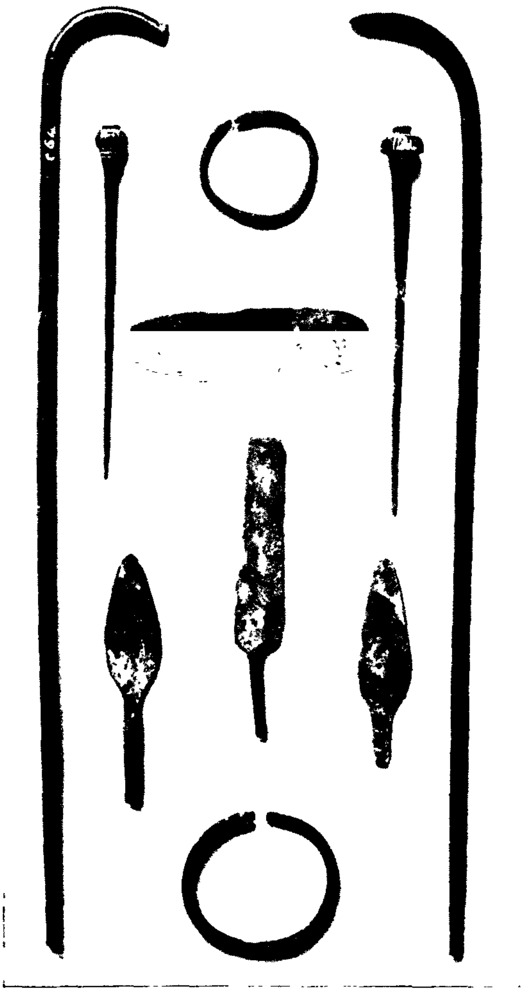

FIG. 2.—VARIOUS OBJECTS.

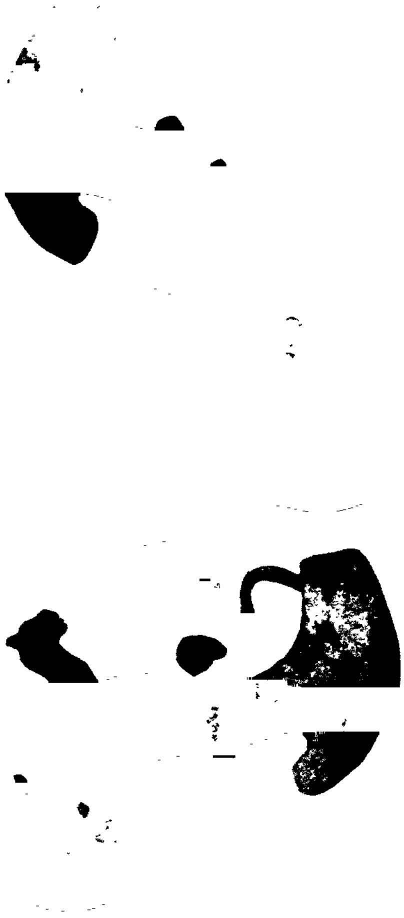

FIG. 3.—AXE HEADS.

BRONZE WEAPONS, IMPLEMENTS, AND VESSELS FOUND AT KHINÁMÁN.

THE ORIGIN OF EGYPTIAN CIVILISATION.

By EDOUARD NAVILLE, D.C.L., LL.D., ETC.

WHO were the Egyptians? Were they a native race, born in the country which they inhabited, or did they come from abroad as immigrants? Were they a mixed population, and if so, can we distinguish the various elements which formed the Egyptian nation? These questions have lately occupied most intensely the attention of Egyptologists. The excavations made during the last twenty years enable us to give an answer very different from the point of view advocated by such masters as Lepsius or E. de Rougé.[1]

For these two pioneers in the field of Egyptian learning, the Asiatic origin of the Egyptians seemed a certainty; especially for Lepsius, who had been very much struck by the fact that the oldest monuments known in his time were the pyramids and the tombs around them, while in Ethiopia, as far as the province of Fazoql, he found nothing but very late monuments. The conclusion he drew from what he saw was that the Egyptians had come through the isthmus of the Suez, and that after having settled first at Memphis, they had extended in the valley of the Nile, the civilisation going up the river towards the south.

This idea seemed justified at a time when nothing was known of the beginning of civilisation, which appeared from the first as complete with all its special characters. As no trace had yet been discovered of its first steps, of a lower and primitive stage out of which the Egyptian culture might have emerged, it was natural to suppose that we had before us an importation from abroad, and that, if not the whole, at least the principal features of the civilisation were a product of Asia, whence they had been brought by the first settlers in the valley of the Nile.

One of the first to dispute the Asiatic origin of the Egyptians was M. Maspero, who in his *History of Egypt* (1895) states that "the hypothesis of an Asiatic origin, however attractive it may seem, is somewhat difficult to maintain. The bulk of the Egyptian population presents the characteristics of those white races which have been found established from all antiquity, on the Mediterranean slope of the Libyan continent."[2]

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[1] E. de Rougé's idea has been expounded by his son, J. de Rougé (*Origine de la Race Egyptienne*, Paris, 1895) "The starting point of the Egyptian Race is to be looked for in Asia where they lived in the neighbourhood of the ancestors of the Chaldæans."

[2] *Daun of Civilisation*, p. 45.

Since M. Maspero wrote these lines, the excavations of MM. Petrie, Morgan, Amélineau, followed by several other explorers, have revealed to us the primitive state of the Egyptians—a degree of culture which had not gone beyond the Stone Age. The tombs discovered in various places have preserved, not only the bodies of their primitive inhabitants, but also their implements, their tools, what I consider to be their idols, and pottery, the painted decoration of which shows their mode of life and their occupations.

These tombs caused great astonishment to the explorers who first opened them. The idea of an Egyptian burial was, till then, so intimately connected with mummification, that it seemed strange to unearth small tombs of oval or rectangular form, in which the body lies without any trace of mummification. The skeleton is folded, the knees being against the chest, and the hands holding the knees or being at the height of the mouth. This has been called the embryonic position. It is not the only form of burial. Sometimes the body has been broken in pieces immediately after death; in other cases there is what is called a secondary burial. After the flesh had been destroyed, the bones have been gathered; occasionally an attempt has been made to give them the embryonic posture, or they have been jumbled together into the tomb; bones belonging to various bodies have been mixed, so that Mr. Petrie believed at first that those burials showed us the remains of feasts of cannibals. With the body pottery of different colours is found in the tombs, and also vases of hard stones remarkably well made and finished; a few rude human figures, some of them characterized by the steatopygy which exists in other countries, and with distinct traces of tattooing, tools of ivory, flint instruments, of exquisite workmanship, and a great number of slate palettes. Sometimes the latter have the forms of animals, chiefly birds and fishes; others are mere lozenges. The purpose of these slates has not yet been clearly recognised. I am inclined to think that they are the images of food offerings, when they are in the hand of the deceased who holds them up to his mouth; or they may be amulets or images of divinities.

That is a short description of what are called the prehistoric or pre-dynastic tombs of the old Egyptians.[1] They were first discovered in Middle Egypt; but, lately, so-called prehistoric cemeteries have been found nearly everywhere above the Delta, so that we have here a positive proof of the existence of a people which had not yet adopted properly Egyptian customs, but which occupied the whole of the valley. Therefore I cannot consider the name 'prehistoric' as being correct. No doubt the state of civilisation revealed by these tombs is that which preceded Menes, the first historical king, but I cannot admit that it should have ceased when the foreign invaders conquered the native race and settled in the valley. Certainly a vase in red pottery, with black rim, of the kind which is most commonly found in those tombs, may be prehistoric, but we have also definite proofs of that style of pottery having lasted, at least till the XIIth Dynasty in historic times. Evidently the native stock was very numerous, it was the bulk of the population, and its customs changed only by degrees. Let us consider what takes place at the present day. In the cities like Cairo or Alexandria, we find all the refinements of civilisation. At a few hours distance if we enter the tent of a Bedouin of the Delta, except for an old matchlock, what we shall see is much more similar to a prehistoric dwelling than to a product of the twentieth century.

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[1] Capart, "Les rites funéraires des Egyptiens préhistoriques," *Annales de la Soc. Scientifique de Bruxelles*, f. xxiv.

Therefore I entirely disagree with the chronological classification which has been attempted of the so-called prehistoric pottery. I believe the true classification should be geographical. We have to notice the peculiar taste and style of each locality. Egypt is a very conservative country; besides, the fact of its not being concentrated around a city, but being a line which extends along the river, makes it much more difficult for an influence originating from the capital, to be felt at the end of the country. Even at the present day tastes and fashions differ in the various localities. The pottery, for instance, is not the same at Sioot, as it is at Keneh or Edfoo. It seems evident that it was the same in antiquity; besides, there might be differences in the degree of development. One locality, under favourable circumstances, may have made a certain progress, while another more remote, without intercourse with its neighbours, may have preserved longer the rude and coarse style of old times. That does not mean that the rude and the more perfect vase could not be contemporaneous.

I should therefore propose that this name "prehistoric" should be dropped, and should be replaced by that of native, or rather African, civilisation. For this is the result of the latest excavations. As far back as we can go we find in Egypt a native race, with customs and culture distinct from that of the later Egyptians, a culture which we must call indigenous, since we have no clue whatever to indicate that it came from abroad. This race does not seem to have progressed further from the Stone Age, but to have attained a remarkable skill in working hard stones, ivory and wood, not to speak of flint implements, of which they have left us magnificent specimens. This culture lasted late in historical times, and may have ceased to exist at very different epochs in the various places where it existed.

I call this culture African. One of the distinct African features is the mode of burial which I mentioned before, the so-called embryonic posture. Herodotus, speaking of the African nation called the Nasamonians,[1] says that "they bury their dead sitting, and are right careful, when the sick man is at the point of giving up the ghost, to make him sit and not let him die lying down."

Now, when Herodotus speaks of a man sitting, we must not fancy him resting on a chair. Seats do not belong to the furniture of a desert dwelling.

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[1] L. iv, p. 190.

He sits on his heels, and, in that posture, his chest leans against the knees, and his hands are at the height of his mouth. Hundreds of old Egyptian statues represent men in that position. Supposing that a man has died sitting, and has fallen on his side; he has exactly the so-called embryonic position, which finds its explanation in that African custom. If afterwards vases with food and drink, and some of his tools are put around him in his grave, his tomb will be the abridged image of the hut in which he sat in his life-time; it will be his "eternal house," as the Memphite Egyptians called the tomb.

As for the secondary burials, I believe the explanation is to be found in a custom still prevailing among some South American Indians, and of which, I am told, some examples have been found in old burials in Switzerland.[1] If a man dies at a great distance from the cemetery which is to be his grave, he is interred provisionally; some time afterwards his bones are gathered and carried in a skin bag to the place where he is to be finally buried. This would explain the disorder which is sometimes noticeable in the bones of a tomb, and the fact that the bones of several skeletons have been mixed together. These skeletons have been brought from another place, after the flesh has been destroyed and carelessly put into their grave.

These tombs give us interesting information as to the mode of life of the primitive Egyptian. We gather it chiefly from yellow vases, hand-made, and decorated with subjects in red painting. These drawings, being very rude, have received different interpretations. It seems to me evident that what they usually show us are not boats, but representations of dwellings. These dwellings were huts, placed on mounds, and probably made of wicker-work. They were surrounded by enclosures made of poles, something like what is called now a "zeriba," sheltering the inhabitants against wild beasts. There are generally two huts with a kind of slope between them, which is the entrance. At the side of one is a standard pole, bearing either the symbol or the god of the village.

In these enclosures we see men whose life is that of hunters. They are armed with bows and spears; the animals are those of the desert; large birds, chiefly ostriches, gazelles and antelopes, of which the rich Memphite Egyptians liked to have large flocks. Trees appear here and there, but the inhabitants of these villages do not seem to have practised agriculture; we do not see cattle, neither oxen nor sheep nor asses, none of the domestic animals. Sometimes men are shown struggling against wild beasts, women holding their hands over their heads, as if they were carrying a jar or a basket. Boats with sails will occasionally appear, therefore they knew how to navigate. The great number of slates in form of fishes are certainly a proof that they practised fishing as well as hunting.

These people, who in some respects seem to have reached only a very rudimentary degree of civilisation, knew how to make fine vases of very hard stone. Their flint instruments are among the finest known, but their sculpture is rude, not in animals, but in the representation of the human figure. The characteristic feature of this race is that they were hunters and not agriculturists.

[1] I am indebted for that information to the kindness of my countryman Mr. A. de Molin.

As for their physical type; the views between the numerous experts who have studied Egyptian skulls are decidedly conflicting. However, they are unanimous on one point. They all agree that the prehistoric Egyptians were not negroes, that they had long hair, generally black, but sometimes fair, and that prognathism hardly appeared.

Some of the authors admit a negroid influence, and have come to the conclusion that there were two races, a negroid and a non-negroid. This view is strongly attacked by others. If we look at the painting of a prehistoric grave found at Hieraconpolis, we find the men of a brown or reddish colour, very like that of the Egyptians of later times.

As for the connection of the prehistoric Egyptians with the other races of North Africa, especially the Libyans and the Berbers, unquestionable evidence has been sought in craniology, or anthropometry. I cannot help quoting the two following statements which are given as equally decisive, and which are derived from the same kind of arguments. Let us hear first Dr. MacIver: "What has anthropometry to say on the question whether the prehistoric Egyptians were or were not Libyans? The answer is most definite and explicit. The prehistoric Egyptians were a mixed race, the component elements of which it is difficult to analyse with exactness, but this mixed race as a whole was not Berber . . . ." and further, "It is impossible any longer to maintain the view that the prehistoric Egyptians were Libyans."[1] If we turn to Professor Sergi, Professor of Anthropology at Rome, we find that he finishes his chapter on the physical character of the Libyans by the following words[2]: "The Egyptians were a racial branch from the same stock which gave origin to the Libyans specially so called, one of the four peoples of the Mediterranean." It is well known that Professor Sergi's statements rest mainly on the study of skulls considered in a point of view different from that of other anthropologists.

These two quite contradictory statements are the best proof that we can trust craniology in the main lines, in its broad distinctions, while it is no safe guide in the minor differences which constitute the ethnological characters. Virchow himself, the illustrious anthropologist, has declared that from the sight of a skull it is impossible to trace with certainty the ethnic position which it occupies.

Thus we find at the origin of the Egyptian civilisation a people with the Caucasian type, with long hair, occupying the valley of the Nile as far as Assuân and further south. Even now various authors suppose that the valley was peopled from Asia, and that these prehistoric inhabitants came from the East. We see absolutely no reason to dispute their native character. We cannot touch here the vexed question how the different nations were born, and how, leaving their cradle, they dispersed in the various parts of the world. We must take them when they first appear as nations. At the first sight which we have of the Egyptians, they show themselves to us as Africans, having some connection with the neighbouring natives of the west, Libyans or Berbers, as they are called now, Tehennu and Tamahu as they are styled in the Egyptian inscriptions.

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[1] D. Randall-MacIver and A. Wilkin, *Libyan Notes*, pp. 103, 107.

[2] G. Sergi, *The Mediterranean Race*, p. 83.

Certainly their civilisation, such as it appears in the prehistoric tombs, is no foreign import. It is so completely determined by the nature of the soil, and by the animals and plants which occupied the land, that we are compelled to affirm that it is of African growth.

It seems nearly certain that in that remote epoch the white races of the north extended further south than they did later, and that they were driven northwards by the negroes. If we consult an inscription of the Vth Dynasty of the old Empire, found in the tomb of an officer called Herkhûf at Assuân, we read that he went to a country called Amam, which could not be further north than Khartûm or the Soudan. The people of Amam wished to drive the Tamahu towards "the western corner of the sky." He himself went through Amam, reached the Tamahu, and pacified them, so that at that time the Tamahu must have occupied countries now called Kordofân or Darfur, or perhaps Borku. Later on, in the struggles which the Libyans waged against the Egyptians, we find them inhabiting the desert on the west of the Delta. Evidently the negro races must have invaded the territory which the Tamahu originally occupied, and compelled them to settle near the coast, where we find them under the Pharaohs of the XXth Dynasty.

With the Tamahu are often mentioned the Tehennu, a name which means "the yellow ones." I consider them as being one of the African nations of a colour lighter than that of the Egyptians, a difference which is so easily noticeable in Cairo in going to the Tunis bazaar.

I believe the name of the prehistoric Egyptians has been preserved. They are called the *Anu*. The sign *An*, with which their name is written, means a pillar—a column of stone or wood, or even as Brugsch translates, a heap of stones. According to Brugsch also, their name *Anu*, or, in the latter inscriptions *Anti* means the Troglodytes or the Trogodytes, the inhabitants of caverns, and in Ptolemaic times this name applied to the Kushite nations occupying the land between the Nile and the Red Sea.

But we find them much earlier; they often occur at Anu Ta Khent, the Anu of Lower Nubia and of Khent Hunnefer, the southern part of Nubia. An inscription in the Temple of Deir el Bahari speaks of the Anu of Khent, Lower Nubia, of Khent Hunnefer, Upper Nubia, and of Setet, which, in the texts of the Pyramids is clearly the land of the goddesses Sati and Anqet, the land and islands of the cataracts.[1] The Anu are found much further north. In the inscriptions of Sinai we see the King Khufu striking the Anu, the inhabitants of the mountains who are evidently the population he conquered when he invaded the peninsula.

An is the name of Heliopolis, one of the oldest cities in Egypt, and the religious capital of the country. The same name, with a feminine termination, is Anit, which means Tentrya (Dendereh), but also Latopolis (Esneh) and Hermonthis (Erment). The land of Egypt is often called the two lands of An, so that we can trace the name of An, not only among the neighbouring nations of Egypt, but in the country itself, from an early antiquity. Evidently this name—the two lands of An—for Egypt, is a remainder of the old native stock before the conquest.

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[1] W. Max Müller, *Asien und Europa*, p. 20.

Anti, a word with an adjective form, means a bow. The sense of the word seems to be "that of the Anu, the weapon of the Anu." We can recognise the Anu in those archers who are represented several times on the slate palettes, which, although later than the conquest, are among the oldest monuments of Egypt. The Anu use arrows with triangular flint points. More often we see them as unarmed men with pointed beards, trodden down by the king, who has taken the form of the divine bull Bat, or torn to pieces by a lion. An ivory blade found by Mr. Petrie shows a bearded prisoner standing, over whom is written Setet, the land of the cataracts, which, as we have seen, is one of the countries inhabited by the Anu.

Several Egyptologists have admitted that the Anu were foreign invaders who had been repelled by the Egyptians. On the contrary I conclude, from what has been discovered lately, that they were the native stock occupying the valley of the Nile, and that they had been conquered by invaders, who very soon amalgamated so completely with their subjects, that they formed one single people.

The aboriginal stock, as we saw, had carried the civilisation to a certain point. But it is clear that before the historical times, at an epoch which we cannot fix, a foreign element entered the valley of the Nile, subdued the Anu, taught them a culture which was unknown before, and created the Egyptian Empire.

With this invasion appears the hieroglyphical writing, which seems to have been unknown to the native stock. This writing has such an absolutely Egyptian character that it must have originated, or rather developed, in the country itself. We do not know any written monument which we may trace to the African dwellers of the country. On the slates and cylinders which are later than the conquest, and which are the oldest written remains which have been preserved, we find signs with an archaic character, but which lasted through the whole time when hieroglyphical writing existed.

Let us first consider how the conquerors designated their kings. It was done in a peculiar manner, in a shape which is always the same. At the top of the group is a bird, usually said to be a hawk, but which M. Loret has recognised to be the peregrine falcon. The bird stands on an oblong rectangle, often called a banner, at the lower part of which is a drawing showing the façade of a funeral chapel, the doorway giving access to the *ka*, viz., the double of the deceased. Above the drawing and below the bird are a few signs which, whenever we understand them, give us an epithet, a qualification of the king. Therefore, it is not his name, it is his first title, the first part of the complicated protocol, which will develop into a sentence, and which forms the royal name of the Pharaohs.

Thus, every king is a hawk, or, as we said, a falcon, the bird which is the symbol of the god Horus, and by which his name was written throughout the Egyptian history from its earliest beginnings to the time of the Romans. The king is the god Horus. This name leads us to Arabia, where the falcon is called *horr.*[1] This is the country where we have to look for the starting point of the race which conquered Egypt. If we consult the Egyptian inscriptions, we shall find that, on both sides of the Red Sea, in Arabia as well as in Africa, there was a region which has had various names. One of them is *Kush*, wrongly translated Ethiopia; another is *Punt*, very frequent in Egyptian texts, where it is synonymous with *Tanuter*, the divine land. It seems that the region originally called by that name was Southern Arabia, whence the populations emigrated, which settled on the African coast. We do not know exactly the appearance of the race in that remote time, but the sculptures of the Temple of Queen Hatshepsu at Deir-el-Bahari show us what was the appearance of the people of Punt. At that time the population of the country was mixed; it contained negroes of different kinds, brown and black, but the real Puntites, or Punites, as I think their name must be read, are very like the Egyptians. They belong also to the Caucasian type, with long hair and pointed beards. Their colour is a little more purple-hued than that of the Egyptians.

Here a very important question arises. Did the Punites, the inhabitants of Southern Arabia, belong to the Semitic stock? Looking at the information which we have derived lately from Arabia and from Babylonia, I have come to the conclusion that they were not Semites. They were Hamites, like the Egyptians themselves, and some of the North African populations, and like some of the inhabitants of Chaldæa, whose origin is also attributed by a few scholars to Arabia, so that they should have the same starting point. No doubt I shall hear the objection that Egyptian is a Semitic language. My answer is that the better we know the Egyptian language, the more fully we grasp the conceptions of the Egyptian mind, the more it seems evident that Egyptian is an ante-Semitic or pre-Semitic language. In certain points it has kept the character of infancy. Semitic languages are in a more advanced linguistic stage, they have outgrown by far the degree of development which Egyptian has reached. To my mind we have to reverse the method which is generally followed. We are not to look for the origin of Egyptian in the Semitic languages, but, on the contrary, to see what the Semitic languages have borrowed from the old Egyptian speech and writing.

The Arabian origin of the Egyptians is mentioned by the Numidian King and writer, Juba,[2] quoted by Pliny. After having given the names of the various tribes of the Troglodytes, the inhabitants of the African coast, between the Nile and the Red Sea, the writer says: "As for the neighbours of the Nile from Syene to Meroe, they are not Ethiopian nations, but Arabs. Even the city of the Sun not far distant from Memphis is said to have been founded by the Arabs." Thus for Juba the Egyptians are Arabs. When he says that they are not Ethiopians, we must consider this word as meaning negroes.

The Arabian origin of the Egyptian population is adopted by several scholars opinions differ as to the way they followed in their invasion. I said before that the opinion of Lepsius, who supposed them to have come through the isthmus of Suez, is now abandoned. Prof. Petrie thinks that they came through the harbour of Kosseir, and that, after having followed the valley of Hamamât, they reached the region where is now the city of Keneh, and where was the old Egyptian city of Coptos. But if we study the traditions of the Egyptians, which are to a certain degree confirmed by the Greek writers, we come to the conclusion that the conquerors must have crossed the Red Sea further south than Kosseir, perhaps in the region where is now Massowah, and that they stopped some time in the valley of the Nile, in the Sudan, before they came down and settled below the cataracts.

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[1] Loret, *Horus-le-Faucon*, p. 20.

[2] Muller, *Fragm. Hist. Graec.*, III, p 477.

This has been translated by Diodorus in this way:—The Greek writer says, "that the Ethiopians assert that Egypt is one of their colonies; there are striking likenesses between the laws and the customs of both lands; the kings wear the same dress and the uræus adorns their diadem." In this case we must give the name of Ethiopians another sense than in the quotation from Juba. It does not mean negroes, but the African population called the Anu of Nubia.

If we consult Egyptian inscriptions, we find that, without any exception, the south is always what comes first. The north is never spoken of as an ancient resort from which the population should have issued. The south has always the pre-eminence over the north. The Kings of the South are mentioned before those of the north; the usual name for king properly means "King of the South." In his orientation when he fixes his cardinal points, the Egyptian turns towards the south, so that the west is for him the right side. That does not mean that he is marching towards the south. In the mythological inscriptions we read that Horus first resided in the south, and coming down the river, conquered the country as far as the sea. The Egyptian looks towards the direction whence his god originally came. This direction is at the same time that of the Nile, of another form of the god who gives him life, and allows him to exist. The mythological narrative of the conquest of Egypt by the god Horus is of the time of the Ptolemies. The enemies of the god often take the forms of animals, and are led by Set. Horus conquers the land for his father, Harmachis, who is the king. "In the year 363," says the text, "His Majesty was in Nubia, and his numberless soldiers with him." Horus is the general who leads the soldiers, while his father remains in his boat. Battles are fought in various places along the river; all the episodes of the struggle are recorded by the names given to localities, to temples or to religious objects such as sacred boats. The last encounter takes place on the northern boundary of Egypt, on the Pelusiac branch of the Nile, at the fortress of Zar, now Kantarah. This narrative seems certainly a late remembrance of an establishment in the valley of the Nile, of a warlike race coming from the south.

In the monuments of the first Dynasties which have been discovered at Abydos and elsewhere there is a record of the conquest and of the subjection of the native stock. It is a festival called the Festival of Striking the Anu.

The oldest representation of it is on the large slate found by Mr. Quibell at

Hieraconpolis. The king, preceded by the queen and by four standard bearers, is shown entering a hall where his enemies are seen lying down with their heads cut off, and put between their feet. The proofs that the enemies of the king are the Anu is the ivory blade, which we quoted before, on which a prisoner is seen coming from the country of the cataracts, which we know was inhabited by the Anu; also a tablet found by Mr. Petrie[1] on which we read that "the heads, or the chiefs of the Anu are brought to the great hall." (?) And lastly, another tablet on which the signs are more doubtful, but which speaks perhaps of the defeat of the Nubians.[2]

On the other side of the slate palette we see the same king holding his enemy by a tuft of hair, and striking him with his mace. This scene is also engraved on a small ivory tablet belonging to King Den, and on ivory cylinders, where the king striking his enemies is repeated many times. We have already mentioned the sculpture of King Khufu at Sinai, where he is seen striking in the same way the Anu of Sinai. It seems to have been the typical and conventional way of representing the victory of the invader over the native inhabitants, and it occurs several times in the Old Empire. Later on it changed. Instead of one single enemy we see a great number of various races. The king holds them bound together by their hair and fells them at a blow. This, in my opinion, does not record victories which the king himself has achieved; it is a conventional and symbolical way of indicating that he belongs to the predominant race, that he can trace his descent to the conquerors of the Anu. The cluster of enemies held together is only a modification of the original scene, which may be invested with a ceremony at the coronation.

The Festival of the Striking of the Anu is mentioned in the Palermo stone, a document of the Old Empire, showing that the tradition persisted. Even as late as the XVIIIth Dynasty, this festival was celebrated by Thothmes III.[3]

The monuments of the first dynasties found at Abydos and Hieraconpolis give us an idea of the civilisation of the foreign invaders. As soon as they appear, we see domestic animals, the bull, the ass, the sheep, which are not found on the pictures of the prehistoric vases. The careful researches made by Dr. Lortet on the mummies of Egyptian bulls have led him to the conclusion that the long-horned bull, which is the oldest breed found on the monuments, is a native race and has not been imported from Asia Dr. Lortet says the same of the ass and of the sheep. Thus the foreign invaders domesticated the animals which they found in the country. The fact of their having practised domestication implies that in that people there was a propensity towards civilisation and progress, which did not exist in the natives. Probably also they were agriculturists. When they settled below the cataracts they took with them the papyrus, which even now is found on the Upper Nile, although it has disappeared entirely from Egypt. This plant was used for various purposes, and not only for making paper.

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[1] *Royal Tombs*, i, pp. 16, 20.

[2] *Ibid.*, ii, p. 32.

[3] Leps., *Denkm.*, iii, p. 55.

Looking at their civilisation in general, we find that there is hardly an element of it which could not originate in Egypt. They must soon have perceived that dry Nile mud was a very good material for building, which did not require to be burnt. The art of building certainly began in Egypt with brick and wood. The first step afterwards was to replace the bricks by stone, of which there were various kinds particularly well suited for that purpose. It is natural that, having such fine material as the sandstone of Silsilis, the limestone from the quarries of Turâh and Thebes, the diorite and black granite from Hamamât and especially the beautiful red granite from Assuân, the Egyptians should have become great builders. It is perhaps the only art in which they far excelled the neighbouring nations, much more than in sculpture or in painting.

As we have said before, the writing also is of decidedly Egyptian origin. We can find in it no trace of a foreign element. Civilisation seems to have grown entirely in the last settlement of the invaders. They adopted and developed the rudimentary culture of their subjects. They improved it so as to produce the admirable display of Egyptian art and industry which occurs under the IVth Dynasty. If the followers of Horus had brought their animals from Arabia, one would expect to see among them the horse, which does not appear before the Hyksos invasion. If they had been already civilised before reaching Africa they would have left traces of their passage in the various places where they stopped. At present no vestiges of an early Egyptian civilisation have been discovered in Southern Arabia, or even on the Upper Nile. However, there is one side of their culture which decidedly comes from abroad, the art of working metal. Except perhaps for a little gold in the country between the Nile and the Red Sea, no metal is found in Egypt, neither copper nor iron. The arrows of the Anu certainly had flint points, and, although the Anu were very skilled in the way they made and used their flint instruments, they did not employ metal. If we consult the inscription of the conquest of Egypt by Horus, we see that his companions are often called *Mesennu,* blacksmiths, who knew also how to cut stone and wood, but whose chief art was that of working metal. Horus gives settlements to his companions in various parts of Egypt. I believe metallurgy must have originated from the necessity of having instruments for the culture of the soil. One can imagine the Horian invaders stopping in a land of remarkable fertility, and feeling induced naturally to improve the means they had of deriving advantage from the admirable soil of the country which they had chosen for their abode. It seems to me that at the beginning metallurgy was the associate of agriculture: later on only it was used for the fabrication of weapons.

We said before that the Horians probably brought into Egypt from their original resort on the Upper Nile that most useful plant, the papyrus. Another plant which is often mentioned in the inscriptions of the first Dynasties is the vine. On the clay sealings of the big jars discovered at Abydos mention is often made of the vineyards from which the wine contained in the jars is derived. Did the vine come to Egypt from Asia? Here again we can trace an African origin for this plant. De Candolle, in his book on the cultivated plants, says that the vine grows spontaneously in Southern Europe, in Algeria and Morocco. The same botanist lays stress on the possible dissemination of the plant through natural causes, like the birds, the wind and the currents. In the oldest lists of offerings several kinds of wine are quoted. When the lists become more detailed and complete the names of the localities from which they came are given. They are most of them places in the Delta.

In the new Empire the good quality of the wine from the various oases is often praised. There it seems probable that the plant came from Africa; the oases always had more connection with Africa—with the West—than with the East. We hear of the Libyan wines brought by the Tamahu. They are known to Strabo as well as those from Mareotis. Thus, even for the vine, we are not obliged to admit an importation from Asia.

The Egyptian, and after them the Greek writers, tell us that the first historical king was Mena or Menes. Herodotus adds that in his time all Egypt except the Thebaid was a marsh. Mena is said to have founded Memphis and its Temple of Ptah, and also to have built a great dyke in order to regulate the course of the Nile. According to Diodorus Menes taught his people to fear the gods, and to offer them sacrifices; also to make use of tables and beds and of fine garments. He introduced luxury among his subjects.

It is usual now to speak of pre-Menite kings. I believe this to be a mere hypothesis. The tradition of Menes having been the first king rests on Egyptian monuments, and is recorded by Greek authors. When a sovereign like Rameses II. engraved on a temple a list of his predecessors, I cannot help thinking that he began with the first, and he would not have put aside the kings who were before Menes, especially when their graves or their funeral chapels were only a short distance from the temple where he engraved his list.

As for Menes, except for the scanty information which we get chiefly from the Greek authors, we are reduced to conjectures. Undoubtedly, he belonged to the race of the conquerors, to the civilisers, but I should not think that he was the leader of the conquest. The tribe of Horus must have been settled in the country some centuries before him. They must have had time to develop the civilisation which we find under the first Dynasties. He probably was the first to unite the whole country under his rule, and thus he was the founder of the Egyptian kingdom.

One may fancy that the native stock, the Anu, consisted of various tribes, each having as its central point the village where, as we see on the potteries, the symbol or god of the tribe was put on a pole as a standard. These symbols are the only religious element, the only trace of worship which we notice on the drawings of the potteries. The tribe of Horus did not eradicate these local cults. As time went on the standards became the great divinity of each nome or province. I believe this is the explanation of the great number of local gods which we find in Egypt. They were at first the tutelary divinity of a small clan of aborigines. The conquerors seem to have preserved the religious traditions of their subjects; for instance, one of the most ancient cities of Egypt, its religious capital, where was taught a cosmogonic doctrine, which was adopted more or less in the whole land, Heliopolis is called An. It has the name of the Anu. These ancient natives appear in later times in religious ceremonies such as the Sed Festival celebrated by Osorkon II., of the XXIInd Dynasty at Bubastis. There does not seem to have existed between conquerors and subjects an irreconcilable religious feud such as there was later between the Hyksos and the Egyptians. It would have prevented their mixing together and becoming one nation.

The relics of the first three dynasties show an extraordinary development of all ceremonies and customs concerning religion. Besides Horus, the Falcon, which is the symbol of the king, the royal god, there are other divine animals, like the jackal, the god Apuatu, the god who shows the ways: and also a bull, or rather judging from the nature of the animal, a buffalo. The hierarchy of priests is already fixed; court employments are mentioned, and festivals which will go through the whole of Egyptian history, like the Sed Festival, which I think to be an indiction. The rites of the foundation of temples are very similar to what they will be in Roman times. Hieroglyphs are sculptured, very archaic in appearance; they are the first rudiments of the hieroglyphical alphabet, which is already fully developed in the IVth and the Vth Dynasties.

Very interesting religious objects are the slate palettes, having on one side near the middle a circular depression surrounded by a ring. These slates are often sculptured, and bear animals or war scenes, or representations of festivals such as that of "striking the Anu." On such slates with a depression there are sculptures on both sides. Therefore I cannot admit with Prof. Petrie that these depressions were made for mixing green paint. If that was their purpose, there was no reason for their being so large as that found at Hieraconpolis, and for being adorned with such fine sculptures, not to speak of their being quite inappropriate for mixing colours. I believe this depression contained a religious emblem, a piece of wood or a precious stone, which had the form, either of a knob or of a bud. It corresponds exactly with the description which Quintus Curtius gives us of the appearance of the god in the oasis of Jupiter Ammon. The god had the form of an "*umbilicus.*" This knob on the Hieraconpolis palette has a guard of two panthers or leopards, in other cases, of two dogs. This is not the only form of the god, who had the name of *Bat.* He may be a bull with one or two heads, and also a tree. In that case the two leopards are replaced by two other spotted animals, giraffes standing on each side of the tree. We have here an example of tree worship, such as was practised in Crete and in the Ægean Islands.

In conclusion, such are the principal features of the civilisation of the early Egyptian dynasties. It belongs to a nation formed by an indigenous stock, of African origin, among which settled conquerors coming from Arabia, from the same starting point as the Chaldæans. This explains a certain similarity between Egypt and Babylon. The foreign element was not Semitic. They belonged, like the natives, to the Hamitic stock, therefore they easily amalgamated with the aborigines into whom they infused their more progressive and active spirit. The result was the Egyptians such as we know them under the first three dynasties, or, as we call that time, the Thinite period. At the end of it something took place which we cannot yet explain—a sudden bound from the rude culture of the Thinites to the refinement in art and industry, and to the literary growth which are exhibited by the IVth Dynasty and afterwards. Has there been a new invasion, coming this time from Asia? It is possible: but there again, we have no historical evidence of any kind, and we have to resort to conjecture.

The dawn of Egyptian civilisation, which we have to place at a very early period, is certainly a distinct proof of the important part played by Africa in the history of human culture. Whether the whole region of the Mediterranean was first peopled by Hamites as is now asserted by various authors, I do not feel competent to decide. But it seems to me unquestionable that the Hamitic civilisation has been the first in date, and that it has largely influenced the islands and the neighbouring nations. When we look at the startling results of the excavations in Crete, when we remember that this island is the natural bridge between Egypt and the Hellenic peninsula, we cannot help concluding with one of the excavators of the "house of Minos," Dr. Mackenzie, that the races who were the bearers of the Ægean civilisation came from the south.

ON A SERIES OF SKULLS, COLLECTED BY JOHN E. PRITCHARD, ESQ., F.S.A., FROM A CARMELITE BURYING-GROUND IN BRISTOL.

BY JOHN BEDDOE, M.D., LL.D., F.R.S.

[WITH PLATE XXII.]

IT is my object in the following paper to give a fuller description than has yet appeared of this very interesting find, from the anthropological point of view. Everything else that can be said about it has been well said already by Mr. John E. Pritchard, in his paper in the *Transactions of the British and Gloucestershire Archæological Society,* to which I contributed a brief report on the bones discovered. I will only premise now that this Carmelite Friary was founded about 1270, probably by Prince Edward, afterwards King Edward I.; that it endured till the dissolution by Henry VIII.; that there was a fine church, in which it is stated some eminent citizens were buried; but that the bony remains hereinafter described were not found in any vaults or buildings, but in the open ground, though buildings of later date had covered most of the site. These buildings were hastily removed, and the site quickly excavated for the reception of a new one, under the provisions of a contract which necessitated haste; but the foresight of Mr. Pritchard, and the goodwill of the contractor Mr. Hayes, and of the clerk of the works, Mr. Ashley, secured eleven skulls in more or less measurable condition, under somewhat difficult circumstances. The soil was a strong red marl, and the bodies lay at no great depth in it, often one above another, in two or even three strata. They were all masculine: there were no women or children. There was not a vestige of a coffin, nor of anything in the way of clothing, with the exception of one buckle, which has been figured by Mr. Pritchard.

The greater part of the crania that were found in anything like good condition were preserved, owing to the zeal and care of the gentlemen superintending the work. The facial bones generally, and the mandibles in several cases, were saved, though some of the latter could not be allocated with certainty. Some of the principal measurements have been published in the appendix to Mr. Pritchard's paper; but the whole of those taken on the crania, with the individual descriptions, are here presented to the Institute, and by the great kindness of Mr. Pritchard I am enabled to give, in illustration, some excellent photographs, by Mr. Brightman of Bristol, of four of the most interesting heads.[1]

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[1] The long bones were too much broken up to yield any valuable evidence as to stature.

Large "finds" of mediæval skulls are uncommon, and when they do occur, the opportunity of utilising them for scientific purposes is generally lost, from haste, or negligence, or quasi-religious prejudice. The great Whitechapel and Moorfields finds, which Professors Thane and Pearson and Dr. Macdonell have utilised so thoroughly, are brilliant exceptions. One which might have proved equally valuable, at Bradford in Yorkshire, lately slipped through the hands of Dr. Rowe and myself, to our great mortification. The present one, though comparatively small, seems to me of considerable value, partly from the clear identification of its origin, but chiefly from the conspicuous manner in which the skulls fall into two extremely dissimilar groups. This is clearly exhibited in one of the annexed tables, as well as in the following arrangement of the eleven indices :—

72,	73,	74,	75,	76,	77,	78,	79,	80,	81,	82,	83,	84,
1	1	1	1			1	1		1		2	2

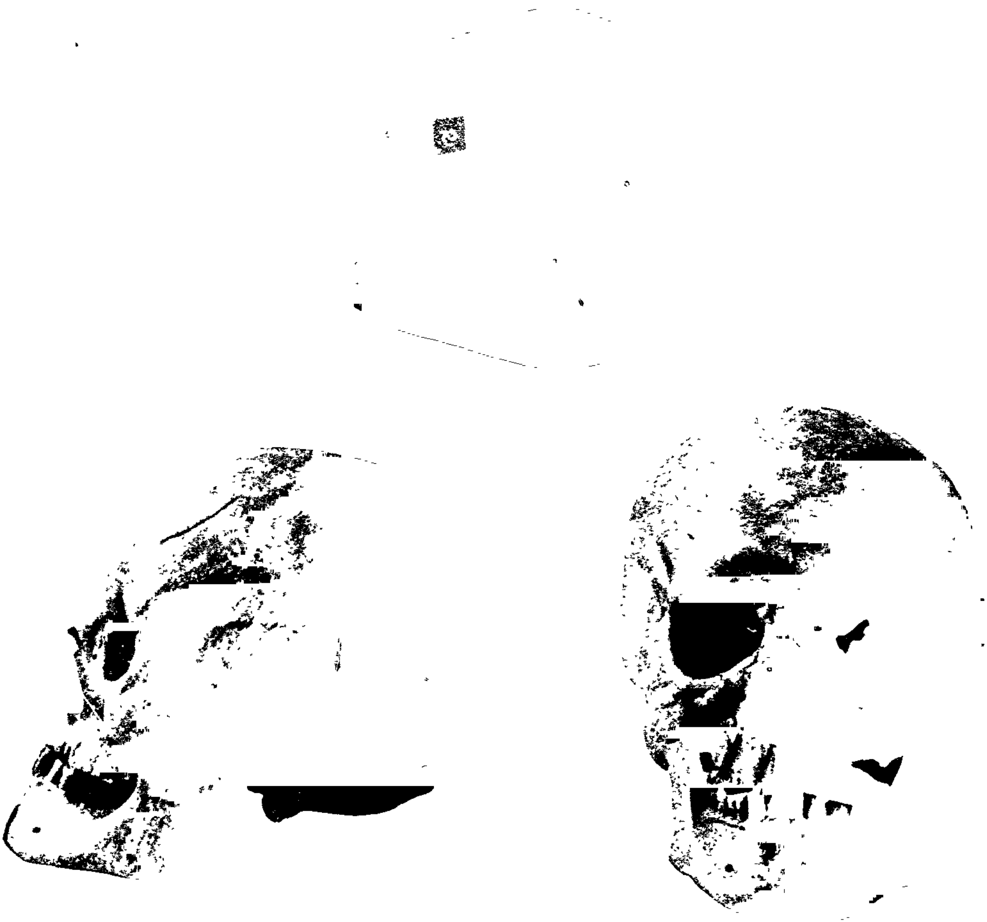
Here all the five brachycephals are of large capacity, some very large; all are lofty (over 74) with good frontal and general development; while the three dolichos are small in capacity, low in elevation, narrow in forehead. The three which are intermediate in cranial index are all more or less imperfect: two at least of them are of good capacity; but they are of ordinary English or Anglo-Saxon type, and do not at all resemble the brachycephals, but may be classified, if at all, with Nos. 3 and 9, though they differ therefrom by greater breadth.

Before attempting to explain the remarkable discrepancies mentioned above and set forth in detail in the table, I must refer my reader to a paper in the *Journal* for 1899, to one "Sur l'histoire de l'Index Céphalique dans les Îles Britanniques" in *l'Anthropologie*, and to the measurements from the St. Werburgh's find, tabulated in my *Races of Britain*. Therein will be found my reasons, based partly on craniological evidence, partly on history and on the surnames, for thinking that the mediæval population of Bristol was largely mixed with French blood, and that more from the brachycephals of Gascony than from the less broad-headed Normans. In the present case, however, it would rather seem as though we had to do with two distinct elements of population of strongly contrasted types, rather than, as appeared to be the case under the vaults of St. Werburgh's, with a type formed by the almost complete fusion of two elements. I am thus led to form another conjecture, which I have already put forward in the appendix to Mr. Pritchard's paper in the *Bristol and Gloucestershire Transactions*, viz.: that the broad, full-brained heads may have belonged to friars, but the small and narrow ones to some of the plebeian lay brethren. These latter would naturally enough be of English or rather native extraction: they may have been not citizens by birth, but immigrants from the less de-Anglicised rural neighbourhood. The first occupants of the Friary may very likely have been brought by the founder from Gascony or even Burgundy, and brought their broad heads with them; and by some not inconceivable chance we may have got hold of the remains of them. In those days community of creed and of clerical profession was often a stronger bond than that of country or race. The commerce and other intercourse between Bristol and Aquitaine must have continued active until the loss of Bordeaux about the middle of the fifteenth century. And later burials may have been, not in the open ground, but in the crypt or vaults, as I suppose those of the eminent citizens above mentioned must have been.

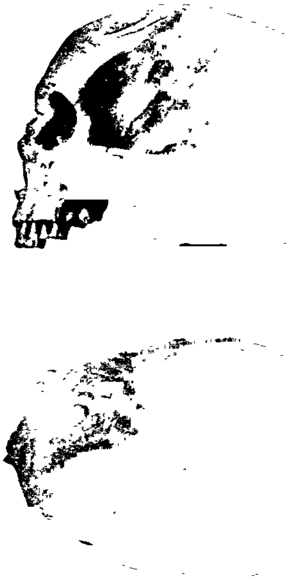
Including those under consideration, I now possess the measurements of forty-nine male crania of the mediæval period, found in Bristol: forty-six of these I have myself examined and measured. Their average dimensions were 186·6 (length); 146·6 (breadth); and, in thirty-eight, 133·15 (basibregmatic height) giving indices of 78·58 and 71·4.

The number is considerable, and one is tempted to contrast these proportions with those of the Bristolians of to-day and yesterday. Ten modern, but not recent, male skulls from St. Werburgh's graveyard gave 78·1 and 71·2, but seven females of the same origin only 74·2 and 71·7, showing a somewhat greater tendency to dolichocephaly. And eighty contemporary (living and male) Bristolians gave me an index of only 77·65, precisely the same as I got from 170 Somerset and Gloucestershire men. On the usual theory of the two degrees of difference between the living head and the dead skull, this would imply a *cranial* index of about 75·65 or, say, nearly 76, which approaches the confines of dolichocephaly. But even if we make no allowance at all for the difference under discussion, we find the modern head distinctly narrower than the mediæval one. Yet the seventeenth century London head (probably the low-class head, while our figures relate partly at least to the higher class) was of still narrower proportions, 75·1 or 75·4. Clearly, if we wish to have any very positive knowledge as to the mediæval English head, we must be on the alert to secure further material, and if possible, as Dr. Macdonell remarks, from a rural district. Meanwhile I must yet once more call attention to the fact that a large proportion of my mediæval material belonged presumably to ecclesiastics and not impossibly to foreigners, who may have unduly raised the index of breadth. I may also remark that No. 7 of my Carmelite skulls departs considerably from the common Anglo-Saxon, Frisian or indeed English types, and that I think I see in it some approach to the one which Macdonell finds so frequent among his Moorfields and Whitechapel collections, and which he is disposed to liken to the long-barrow type. In my own opinion its *chief* measurements are not nearer to those of the ordinary long-barrow man than to those of the Rowgrave man, for example: probably it might crop up in the course of urbanisation in any race of European dolichocephals; but it does seem to occur in Sicily; and it is not common among the old Anglo-Saxons or the modern English. After all, one must confess that a trained eye can tell us more, sometimes, than the most elaborate craniometer; but the trained eye grows dim and perishes, and its impressions vanish, while the printed results of craniometry may go for ever, or till craniometry loses all interest and value.

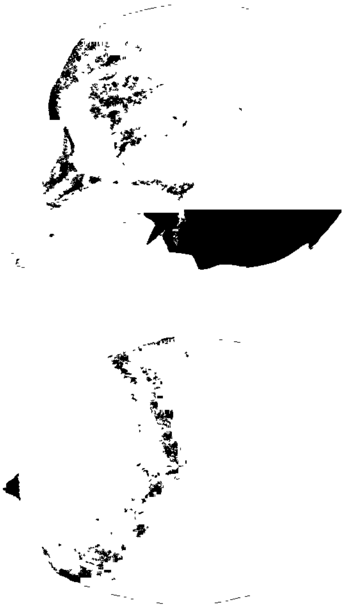
Many of us think that the comparatively sluggish brachycephal is destined, like a phagocyte, to envelop and exterminate the restless and migratory dolicho-blond, in civilised countries. There are plenty of facts that point in that direction. On the other hand, Pittard's observations seem to indicate a converse process in the Wallis; and the same is said to be the case in Tyrol. Ammon and De Lapouge seem to find a dark long-headed type to be the growing one. I think such is the case among the proletariat in England; but I cannot prove it: and I have a strong impression as to the important part which conjugal selection bears in such changes.



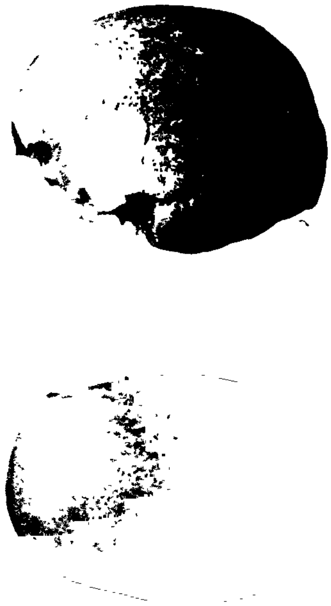
SKULL NO. 2.



SKULL NO. 7.



SKULL NO. 4.



SKULL NO. 3.

SKULLS FROM A CARMELITE BURYING GROUND, BRISTOL.

TABLE OF MEASUREMENTS OF SKULLS FROM CARMELITE CEMETERY, BRISTOL.

	Lengths.						Breadths.							Height.		Arcs.											Orbit.		Nose.		Mandible.				Indices.		Estimated capacity.
	Gla. Max.	Fro. Ini.	Gla. Ini.	Oph. Max.	Fac.	Fac. Up.	Fro. Min.	Step.	Zyg.	Aur.	Max.	Mast.	Ast.	Bas. Breg.	Bas. Max.	Circ.	Fro.	Par.	Oc. Up.	Oc. Lo.	Sagit. Tot.	Foramen.	Bas. Na.	Bas. Alv.	Tra. (Q.)	Ant.	B.	H.	L.	B.	Chin.	Body.	Ram.	Big.	Lat.	Alt.	
1. Adult ...	180	178	174	179	113	65	101	123	137	116	146	126	104	135	—	530	122	133	70	41	366	36	101	99	333	294	37	33·5	44	25	34	95	71	—	81·66	75	1526
2. Old	190?	186·5	179	189?	127	77	105	130	140	126	161	138	110	148	—	560	136	204		52	392	38	103	91?	359	—	38·5	33·5	58	26	41	98	71	—	84·74	77·9	1859
3. Adult ...	182	181	176	180	—	—	97	118	—	116?	134	129	109	131	132·5	519	130	125	55	63	373	39	95?	—	317	278	—	—	—	—	—	—	—	—	73·62	72	1381
4. Old	181	181	176	180	—	82	107	129	140	123	153	130	—	135	135	540	132	128	76	47	383	37	97	98	350	295	38	35·5	56	24	—	—	—	—	84·53	74·6	1608
5. —	186	180	180	182	—	—	97	110	—	—	146	—	—	—	—	534?	135	125	77	51	388	—	—	—	—	—	—	—	—	—	—	—	—	—	78·5	—	—
6. —	185	—	—	—	—	—	—	—	—	—	147	—	—	—	—	—	135	127	78	44	384	—	—	—	—	—	—	—	—	—	—	—	—	—	79·4	—	—
7. Young ...	185	180	175	184	—	67	90	110	124?	107	137	108	100	126	—	517	132	130	75	46	383	35	102	102	310	270?	36	33	45	21	—	—	—	—	74·0	68·1	1390
8. Elderly ...	182	179	171	182	118	70	98	112	127	109	137	119	109	—	—	516	130	124	71	48	373	33	97	96	322?	—	36	32	51	23	32	—	—	—	75·27	72	1451
9. Young ...	187	183	180	187	116	73	96	110	—	106	135	120	—	132	—	521	129	131	71	52	383	36	98	94	308	278	40	34·5	51	25	—	82	—	94	72·2	70·6	1422
10. Mid-age ...	185	189	187	185	112	67	108	132	139	116	154	130	110	143	—	533	136	134	58	54	382	34	109	101	348	—	38	27	48	25	33	89	62	94?	83·24	77·3	1688
11. Very young	183	183	179	182	116	69	106	133	133	121	153	136	—	137*	—	535	132	206		44	382	—	—	—	340	289	38 36	36 36	49	21	33	83	?	97	83·6	74·83	1655
Average of 11 ...	183·7	(10) 182	(10) 177·7	(10) 183	(6) 117	(8) 71·2	(10) 100·5	(10) 120·7	(7) 134·3	(9) 115·5	145·7	(9) 126·2	(6) 107	(8) 136	—	(10) 531·5	131·8	(9) 128·5	(9) 71·2	49·9	380·8	(8) 36	(8) 100·2	(7) 95·8	(8) 329·8	(6) 283	(8) 37·5	(8) 33·4	(8) 50·2	(8) 24·7	(5) 34·6	(5) 89·4	—	—	79·16	(8) 73·4	(8) 1565
„ 3, 7, 9	184·6	181·3	177	183·6	—	(2) 70	94·3	112·6	—	109·6	135·3	119	(2) 104·5	129·6	—	519	130·3	128·6	67	53·6	379·6	36·6	99	(2) 98	311·6	275·3	(2) 38	(2) 33·7	(2) 48	(2) 23	—	—	—	—	73·3	70·2	1398
„ 1, 2, 4, 10, 11	183·8	183·6	179	183	117	72	105·4	129·4	137·8	120·4	153·4	132	(3) 108	139·6	—	539·6	131·6	(3) 131·6	(3) 68	47·6	381	(4) 36·2	(4) 102·5	(4) 97·2	(4) 345·5	(3) 292·6	37·7	33·5	51	24·2	(4) 35·2	(4) 96·2	—	—	83·55	75·9	1666

* The height, 137, is conjectural ; that from opisthion to 1½ inch behind bregma is 146.

The measures are those I usually take : they mostly explain themselves. The transverse arc (Q) and the anterior arc are taken from the *centre* of the auditory meatus, in the manner of Von Baer and Busk : the former crosses the bregma. The "auricular" breadth at the pit above the root of the zygoma. The circumference as low down on the glabella as conveniently may be. Facial heights from Nasion.

1. Regular broad oval ; maxillary breadth not far back, glabella moderate, orbits squarish, teeth sound, slightly prognathous, nose aquiline.

2. Occiput broken in, decayed from resting on damp earth, had perhaps been bothrocephalic. Sphenoid in vertical, cuboid in lateral aspect, maximum breadth posterior edge of temporals, bregma ossified, orbits rounded, fine domed forehead, opisthognathous, teeth sound, but worn smooth, nose fine, thin, high. Magnificent skull ; resemblance to the late Dean Elliot.

3. Regular smooth ellipse ; domed forehead ; inion huge, forms extreme point of occiput, which is acuminate.

4. Regular broad oval ; maximum breadth temporal, forehead domed ; norma occipitalis somewhat pentagonal ; orbits squarish ; three teeth sound, worn ; nose fine, thin, high Resembles No. 2.

5. Ovo-pyriform : superior curve regular, one temporal missing.

6. Full regular oval, occiput rounded, well filled, superior outline convex in region of "firmness," Anglo-Saxon type.

7. Beloid or sphenoid, lateral aspect oblong, nose doubtful, forehead domed, teeth good, unworn ; wisdom teeth coming through.

8. Ovo-elliptic ; cerebellar region full, flat floored ; forehead domed, brows flat, nose fine, thin, prominent ; teeth sound, worn.

9. Oval, slightly pentagonal, but forehead arched in norma verticalis ; 324 transversely over "firmness": laterally has A.S. aspect, brows not marked, orbits small, rounded ; phænozygous, frontal suture, maxillary prognathism, slight bothrocephalism.

10. Broad ellipse ; regular curve in profile ; high domed forehead, occiput rounded, receptaculum cerebelli small, flat, foramen far back, inion large, orbits oblong, nose short, aquiline or prominent ; 20 teeth, sound, worn.

11. Ovo-elliptic, but in norma lateralis quadrate, forehead vertical, domed, glabella flat, some alveolar prognathism, nasal form doubtful, orbits megaseme, circular. Right occipito-parietal region much decayed, probably from disease ; very young, wisdom teeth not through.

CARMELITES.

TABLE OF SKULL CAPACITIES.

(Calculated) Mean Capacity by several different processes.

	Manouvrier.	Pelletier.	Pearson.				Beddoe 5.	Welcker.	
			P. & L.	10 bis.	Bas. Br.	G. F.		C.	D.
Mean of 8	1585	1586	1487	1507	1502	1555	1604	1541	1583
				1499				1562	
Do. of 3 Doli. 3, 7, 9	1371	1387	1352	1357	1389	1438	1415	1347	1471
				1366				1409	
Do. of 5 Brach. 1, 2, 4, 10, 11 ...	1713	1701	1568	1597	1550	1632	1718	1657	1651
				1572				1654	
Difference	342	314	216	240	161	194	303	310	180

Mean capacity by 6 processes, Pearson's 3 diametric plans being counted as one, and Welcker's 2 as one.

Skull No. 1	...	1526
2	...	1859
4	...	1608
10	...	1688
11	...	1655

Skull No. 3	...	1381
7	...	1390
9	...	1422
8	...	1451 (mean of 3 prs.)

Mean of 1, 2, 4, 10, 11 ...	1666
Do. 3, 7, 9	1398
Difference	268
Mean of whole 8 ...	1565

Cranial index (latitudinal) in 1, 2, 4, 10, 11	83·55	(altitudinal)	75·93
3, 7, 9	73·29		70·23
5, 6, 8	77·72		
3, 5, 6, 7, 8, 9	75·50	(3, 7, 8, 9)	70·9

HINDU BIRTH OBSERVANCES IN THE PUNJAB.[1]

By H. A. Rose, Local Correspondent of the Royal Anthropological Institute.

I. Observances before and at Birth.

Lucky and unlucky births.—The auspiciousness—or the reverse—of a birth depends upon several factors, such as the season or time of its occurrence, its sequence relative to preceding births in the family,[2] and the child's position at birth.

Premature birth.—Birth in the eighth month of pregnancy is attributed to a cat having entered the mother's room in a former confinement. A child born in this month will, it is believed, die on the eighth day, in the eighth month, or eighth or eighteenth year, after birth. Hence the number eight is never mentioned in speaking of a child's age, *an-ginat* or "uncounted" being used instead: thus, *an-ginat din* = eighth day,[3] *an-ginat barhâ* = eighth year.

In Kângṛa a child which dies at birth, or immediately after it, is inauspicious, and its nose is bored, for a gold ring to be inserted, in order to avert its evil influence.

The aṭhwâhâ.—In the Dera tahsīl of Kângṛa a child born in the eighth month is called an *aṭhwâhâ* (fr. *aṭh*, 8), and is regarded as unlucky to both its parents, foreboding the father's death. As a remedy a spinning-wheel is passed thrice round the mother's head, and then given to the midwife.

Unlucky times for Birth.

Monday is an unlucky day for birth, and as a remedy the child's nose or ear is bored.

In some parts, *e.g.*, among orthodox Hindus in Bahâwalpur, Ferozepore and Mandi, the following remedies are used to counteract the evil influences of the various planets:—

Saturn: seven kinds of grain, or anything black, such as iron or a black buffalo, should be given away in charity.

Mars: articles such as copper, *guṛ*, cloth dyed red, oil, etc.

The Sun: reddish things, such as *ghî*, gold, wheat, a red-coloured cow, etc.

The Moon: white articles, such as silver, rice, a white cow, white cloth, etc.

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[1] This paper is a continuation of the paper on "Hindu Pregnancy Observances in the Punjab" (*J.A.I.*, vol. xxxv, p. 271).

[2] For the significance of the sequence of births, see *Folk-Lore*, vol. xiii, pp. 63–67, and pp. 279–280.

[3] But the same writer (S. Gurdiâl Singh in *J.A.S. Bengal*, lii, Pt. 1, p. 205), says that a child is never said to be so many days or months old, but so many *years*, *e.g.*, *châr barhe* = four days or four months old, as well as four years.

Mercury and Venus: green articles, such as *mung* (a kind of pulse), green cloth or fruit, such as oranges, etc.

Jupiter: yellow things, such as yellow cloth, gram-pulse, yellow sweetmeats (*nukhti* and *laddu*), gold, etc.

To avert the evil effects of Rāh (or ascending node): coconuts, *ghî,* sugar (*khand*) and *māsh* (a kind of pulse); and that of Ketu (Kret) or typhon (the descending node): *samosā* (a kind of sweetmeat) and bluish cloth are given in charity.

This is termed *girāh-pūjā* (or worship of the planets).

A birth which occurs during the *panchak* period will, it is believed, be followed by the birth of three children of the same sex.

The *gaṇḍas* are five days which fall in the dark half of the lunar month, and a child born on any of these dates bodes ill to its parents. Accordingly, the father must not see the child until, in the recurrence of the *nakshatra* in which it was born, he has worshipped the gods, or until five dolls have been made, put in a copper vessel and anxiously propitiated. Fruit is placed before them, as they are believed to eat; and Brahmans recite *mantras.* Lastly, an earthen jar is pierced with twenty-eight holes and filled with water and various drugs. It is then hung up some distance from the ground and the water allowed to trickle on to the parents heads. After this the Brahmans are rewarded.

As we have already seen, eclipses affect the parents during pregnancy. So too a child, of either sex, born during an eclipse brings ill-luck, to avert which the following observances are in vogue, at least in Kângṛa:—

The image in gold of the deity connected with the asterism in which the eclipse occurred, and one of the sun (if it was eclipsed), or of the moon (in the case of its eclipse), together with an image of Râhû, are reverenced. A *hawan* is also performed, *ak* wood being used if the sun was eclipsed, or, if the moon, *palâs.* Like other unlucky children, a child born under an eclipse is weighed every month, on the *sankrânt* day, against seven kinds of grain, all of which is given away.

A child (unlike a calf) born in Bhâdon is lucky, while one born in Kâtak is inauspicious, and the mother of such a child should be turned out of the house, though she may be given to a Brahman and then redeemed from him. Children born under certain asterisms are peculiarly liable not only to misfortune themselves, but to cause evil to others, and various rites are performed to avert the consequences of their birth.

A child born in Kâtak must either undergo symbolical birth from a cow (*goparsab*), or both it and the parents must bathe, on the first *sankrânt* after the end of Kâtak, in water drawn from seven wells and mixed with turmeric, sandal, ginger and other drugs. These are termed *sarbokhadî,* and are placed in an unbaked earthen jar, with 1,000 orifices and a lip, the appropriate *mantras* being duly recited. Water from seven wells or rivers is then similarly purified by *mantras.* The parents, with the child in its mother's lap, are then placed under a sieve, through which the water is poured. *Hawan* is then performed, and lastly a tray of *ghî* is given away by the parents in charity

A child born when the moon is in the sixth or eighth zodiacal sign is ill-omened, and to avert its influence the following rite is observed: On the twenty-seventh day after the birth a basket made of bamboo is filled with sixteen *sêrs* (thirty-two lbs.) of rice, some camphor, a pearl, a piece of white cloth and some silver, and given away in charity, together with a team of white calves yoked, and vessels of milk and *ghî.* Worship, in which white sandal-wood and white flowers figure, is also performed. This, however, is an orthodox rite, and in Kângṛa the popular idea is that a child born in the *ghâtî-chandarmân, i.e.,* when the moon is inauspicious, is not ill-omened.

The unlucky *tiths* or lunar days for birth are the *amâwas,* or last day of the dark half; and the *chaturdashî* (vulg. *chaudas*) or fourteenth, the last day but one. Children born on the former day are unpropitious to the father, those born on the latter to the mother. To avert their evil influence an idol of Shiva is made of silver, and in an earthen jar are placed leaves from various trees, mango, *palâs, pîpal,* etc. A coconut is then placed on the jar, which is covered with a red cloth; and on this is put the idol of Shiva, after it has been purified by *mantras. Hawan* is performed with sesame, pulse (*mâsh*) and white mustard. The idol is given to a Brahman.

The following thirteen *nakshatras* and conjunctions, especially 1 to 6[1], are unlucky:—

1. Asauni (Aswini).
2. Rewati, Reotî (Piscium ζ and 31 other stars, figured by a tabor).
3. Maghâ (δ Regula, γ, ζ, η and ν of Leo, figured by a house).
4. Shlêkhân (Ashlekhâ, the southern claw of Cancer).
5. Mûlan (Mûl, the tail of Scorpio).
6. Jêshṭan (the eldest or first lunar asterism, and consequently of the same import as Mûl, the "root": see Bentley's *Hindu Astronomy,* p. 5).
7. Grahn (eclipse).
8. Atepât.
9. Saṅkrânt (passage of the sun or planetary bodies from one sign into another).
10. Ganḍ.
11. Chaudas (14th of the lunar fortnight).
12. Amâwas (the first day of the first quarter in which the moon is invisible: see also Platts, *s.v.*)
13. Bhadrâ, (the 2nd, 7th and 12th days of a lunar fortnight).

Each *charaṇ*[2] has a special influence of its own. Thus in Shlêkhân the second *charaṇ* is fatal to wealth, the third to the mother and the fourth to the father.[1] In the Jêshthâ asterism, which is divided into ten *charaṇs*, each of six *gharîs*, we have the following scheme of fatality :—

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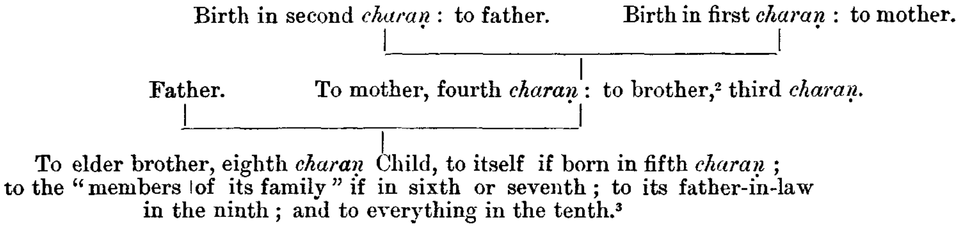
[1] In Nurpur tahsîl of Kângṛa the evil influence of a birth in any unlucky *nakshatra* is averted by bathing the parents and child with water from a jar, containing 1000 holes, into which leaves from 108 male trees are put (mango, *pîpal,* banian, are male; while *nâkh,* 'pear,' and *berî,* 'plum,' are feminine). Children born in the remaining seven of the thirteen *nakshatras* specified are not very unlucky, and the planets are merely worshipped by the more rigid observers of Hindu precepts.

[2] Lit: "foot."


Birth in second *charaṇ* : to father.
Birth in first *charaṇ* : to mother.
Father.
To mother, fourth *charaṇ* : to brother,[2] third *charaṇ*.
To elder brother, eighth *charaṇ*
Child, to itself if born in fifth *charaṇ* ; to the "members of its family" if in sixth or seventh ; to its father-in-law in the ninth ; and to everything in the tenth.[3]

In the Mûl asterism the first *charaṇ* is unpropitious to the father, the second to the mother, and the third to wealth.[4]

The Gaṇḍs.—The fourth *charaṇ* in the Shlêkhâṇ, Jêshṭhâ and Rêôtî asterisms, and the first in the Mûl, Ashwini and Maghâ are called *gaṇḍs*, and a birth in these is unlucky: if it occur by day, to the father; if by night, to the mother; and if in the morning or evening, to the child itself.[5]

But all these refinements are hardly known to popular astrology, and the general practice is to regard births in the Jêshṭhâ, Mûlâ, Shlêkhân and Maghâ asterisms only as unlucky.[6]

In the Simla hills the evil influence of a birth in the Krishnpak chaudas is averted by propitiating the nine planets. A birth at the end of a month and in the Jamgandhjag, Kalijag, etc., is unlucky to the parents, etc.; and they should not see the child's face until alms have been offered. Triplets portend the speedy death of parents, and, to avert the evil, *hawan* is performed, alms are given to the *parohit* and the *shânti maukat* is read.

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[1] To avert the evil influence five earthen jars, filled with water and leaves (*pîpal*, etc.), are covered with a red cloth, and the golden image of a serpent placed on them and worshipped. The person to whom the birth forebodes evil gives alms, and a *hawan* performed with *ghî* : Kângṛa. In Dera the five jars should contain gold images of Brahma, Vishnu, Mahêsh, Indra and Varuna.

[2] Special attention may here be directed to the position of the mother's brother in astrology. The part played by him in weddings *may* conceivably have an astrological basis. He is curiously affected by his sister's child cutting its upper teeth first : see *Indian Antiquary*, vol. xxxi, 1902, p. 292.

[3] To avert the evil a piece of ground is plastered with cow-dung and a platform for a *hawan* made on it. On this platform *mantras* are written in flour. In five jars, full of water, are put the leaves of five trees (*pîpal*, mango, *palâkhar*, *palâs*, and a fifth), with *panchamrit* and *panchgabh*. In a sixth jar, unbaked, with 1,000 orifices, are placed 107 different drugs. The parents and child are then drenched through a sieve, and then they join in the *hawan*, which must be celebrated by sixteen Brahmans. Finally parents and child bathe in the water from the five jars : Kângṛa.

[4] The rites are the same as in the case of a Jêshṭâ birth, except that the idol made is a gold one of a râkhshasa : Kângṛa.

[5] The rites resemble those in the Jêshṭhâ or Mûl cases, but a cow is also given as alms in the child's name : Kângṛa.

[6] In the Dera tahsîl of Kângṛa the rites observed on such births, or in those which occur under an inauspicious (*ghâtak*) moon, are simple. Images of Brahma, Indar, Sûraj (Sun) and Chandarmân (Moon) are placed in four jars, with the leaves of seven trees; the jars are then filled with water and covered with a red and white cloth. Mother and child are then sprinkled with the water.

The First-born.—Speaking generally, the birth of the first-born child, provided it is not a girl, is the occasion for special rejoicings—and in Kângra a pilgrimage is made to the family god (*kul-deota*), and a he-goat, called the *kudnu randâ*, is let loose in his honour, another being also sacrificed at his shrine, and a feast given.[1]

In Sarâj a few people of the village visit the parents' house and fire off guns. The father feasts them, and gives each guest a small turban and a rupee; the village *deota* and musician also receiving each a rupee. This money is called *wadhâî kâ rupîya*, and it is all deposited with an honorary treasurer, and when enough has been collected a great feast is held.

In Hamîrpur the *panjâb* rite, which consists in giving alms to the poor, is observed on the eleventh day after the birth. Brahmans and the kinsmen are also feasted, menials also receiving gifts. A good deal of money is thus spent.

Place of confinement.—It is a very general, but by no means universal, custom for the wife to return to her own parents' house for her first confinement.

A child born in the house of his *nâna*, or mother's father, often receives the name of Nânak.[2]

Care is taken not to let the fact that the pains of labour have begun be noised abroad, lest publicity increase their severity. And if the pains are severe a tray (*thâlî*), on which a charm is written, is shown to the patient in order to remove them.

It appears to be the universal custom for delivery to be effected on the ground.[3] But after it is over the mother is usually seated on a mat or hassock. It appears to be almost the universal custom to tell her that she has given birth to a girl,[4] in the curious belief that if she were to learn that she had become the mother of a son, the after-birth would not come away.

As a rule the umbilical cord is cut with a sharp knife, but in Ludhiâna it is tied with the *janeo* of an elderly man belonging to the family. This is also the usage in Hoshiârpur and Siâlkot, but in these Districts, if the child be a girl, the cord is tied with the thread of a spinning-wheel. Any other method is supposed to injure the child. In Gûjrânwâlâ the cord is not cut till two or three hours after birth.

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[1] A great many Hindu women who have never had children, or been unable to bring up any, propitiate the Deity by vowing that their *first-born*, if preserved, shall, till he comes of age, or of a certain age, serve in the procession of the Tâzia as a water-carrier, or in some other capacity; and such sons always wear the green uniform till they attain that age during the Muharram, and serve as their mothers have vowed they shall serve, but return to Hindu rites and ceremonies as soon as the Muharram is over, without prejudice to their caste or reproach from their associates. MS. note in a copy of *Sleeman's Rambles and Recollections* (? by the late Mr. Carr Stephen).

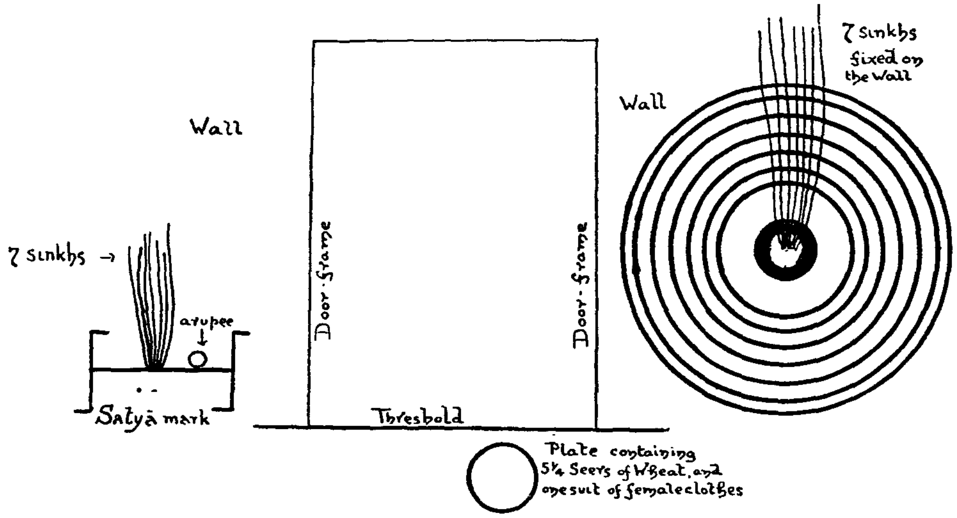
[2] *Cf.* Temple in *Proper Names of Panjabis*, p. 50. I am unable to say whether Nânak, the founder of Sikhism, was so named for this reason.

In Hoshiârpur delivery is said to be effected on a *chârpai.*

[4] And if she has given birth to a girl, she is told she has borne a stone.

Satyâ-worship.—A curious custom is observed in the Jînd State and adjacent territories. On the birth of a boy the worship of *satyâ* is thus observed: on the *chhaṭi* (sixth day after the birth) seven concentric circles[1] are made with cow-dung on one side of the wall near the door of the house, and in a lump of cow-dung, stuck in their centre, is fixed a four-anna bit (*chuannî*), while seven *sînkhs*[2] are also stuck in the central lump. On the other side of the door the *satyâ* mark is made on the wall with cow-dung, seven *sînkhs* being fixed in the middle of it on the wall, and a rupee put near them as shown in the diagram. A plate containing five and a quarter *sers* of wheat and a suit of woman's clothes is placed at the middle of and outside the threshold. The mother now comes out and sits by the plate. She worships these things, and then the wheat, suit of clothes, and the two coins are given to the boy's father's sister.[3]

This observance appears to be identical with the propitiation of Satiai in Bombay; see, *e.g.*, *Bombay Gazetteer*, xvii, 155, and xviii, p. 471.


7 sinkhs fixed on the wall
Wall
Wall
7 sinkhs
a rupee
Satyā mark
Door-frame
Door-frame
Threshold
Plate containing 5¼ Seers of Wheat, and one suit of female clothes

Disposal of the after-birth.—In Ferozepore the secundines are buried in a corner of the house.

In Mandî the after-birth is buried at the spot where the child was born, after the eldest matron of the family has made the mother worship it.

Death in child-bed.—If a woman die within thirteen days of her delivery it is believed that she will return in the guise of a malignant spirit to torment her husband and family. To avert this a *shânti* is performed at her funeral, a piece of red cloth and the grass image of her child being placed on the bier. Some people also drive nails through her head and eyes, while others also fasten nails on either side of the door of their house.

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[1] In some parts this ceremony is shortened, and instead of seven, five circles are made, and so on.

[2] *Sînkh* or *sink* means a twig from a broom.

[3] The people of Bāpurā, in Tahsîl Bhiwânî, put the *sînkhs* in the reverse of the usual way placing the thinner or upper ends downwards. The reason is said to be that owing to an accident to Lakkhan Mahâjan, their ancestors bade their descendants do so until they had gained a victory over the people of Sanwar and brought bricks from that village. This is the form of the *satyâ* as drawn in the account received from the Jînd State. Elsewhere the *satya* or *sâtiâ* resemble the ordinary *swâstika* in shape.

In Hoshiârpur a woman whose child has died within forty days is called a *parchhâwân*,[1] and she must not see a woman in confinement during the first forty days after birth.

II. Observances subsequent to the Birth.

The observances after birth are manifold, and their character complex, so that it is as difficult to distinguish between the religious and social observances, as it is to say what usages are based on magic and what on the first glimmerings of medical skill. Nevertheless, under much that is barbarous and puerile there are traces of more rational ideas regarding cleanliness, and even a kind of primitive anticipation of antiseptic treatment. One important point to note is that the observances are far less elaborate in the case of a girl child, and this idea, that the birth of a girl is a misfortune, re-acts injuriously on the mother, less care being bestowed upon her, and every observance being hurried over and many stinted, if the child is not a boy. Thus in Râwalpindî the mother of a son is carefully tended for forty days, but if the child is a girl for only twenty-one.

The period of impurity.—The period of impurity is most commonly called *sûtak*, but it is also known as *chhût*, especially in the north-west of the Punjab.

Its duration is, in theory, ten days among Brahmans, twelve among Khatrîs, fifteen among Vaisyas and thirty among Sudras, thus varying inversely with the purity of the caste. But in practice it is eleven days among Brahmans and thirteen among Khatrîs; or only eleven or thirteen for all castes.[2]

Among the Jaṭs of Hoshiârpur, who may in this connection be regarded as typical of the Hindus of the Punjab proper, the following is the method of treatment after birth:—

The midwife washes the child in a vessel into which silver has been thrown, before she gives it to the mother. But the child is not suckled for one and a half days. The pap must be washed by the husband's sister before the child can be fed. For this she receives a fee.

As on all auspicious occasions, oil is thrown on the ground and under the mother's bed, beneath which green *dûb*[3] grass is also placed, as it is a sign of prosperity; and, as such, some is also presented to the child's father by his friends.

To prevent mischief to the mother or the child, a number of precautions are taken:—

i. Fire must be kept in the room, as must also

ii. Grain close to the bed, as an emblem of good luck.

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[1] *Cf.* Paṛchhain, shadow.—*Panjabi Dictionary*, p. 868.

[2] In Rohtak and Lohâru it would appear to be only ten, expiring with the *dasûthan*. In Gujrânwâlâ it is said to be thirteen days for Brahmans and sixteen for others.

[3] Probably *dabbh* is meant. *Dabbh* or *drabbh* (*Eragrosti* ; *Cynosuroides*), is a spear-grass used in various rites : *dûb* (*Cynodon dactylon*) is a close-growing grass well adapted for turfing.

iii. Water must also be kept there, as it is a purifier; and
iv. A weapon should be placed close by the mother.
v. Under the bed should also be kept the handle of a plough.[1]
vi. There should be a lock on the bed, or else it should have a chain round it. This is termed *bel mâria.*[2]
vii. On no account should a cat be allowed in the room, nor should the mother hear one call, or even mention the word "cat." It is most unlucky for her to dream of the animal, and if one is seen in the room, ashes should be thrown over it.
viii. The house should not be swept with a broom—lest the luck be swept out of it.
ix. No small drain into the room should be left open, lest ill-luck enter by an aperture which must be unclean.
x. A lamp must be kept burning all night, and allowed to burn itself out in the morning. A son is called *ghar kâ dîwâ,* so if the lamp were blown out, he too would be destroyed.

Neither mother nor child must come out of the room for thirteen days.

On the thirteenth day the mother gives her old clothes to the midwife, who sometimes shares them with the *nain.* The latter brings some cow's urine in a *ṭhîkrâ* or jar, with green grass, a *supârî,* and a *nahernâ,* or nail-parer. She sprinkles the cow's urine over the mother with the grass, burns some incense, and pares her nails for the first time since her confinement. Then the mother must put on the *nai's* (the *nain's* husband's, not the *nain's*) slippers, and walk out of the room carrying the child. The *nain* sprinkles oil on the ground outside the door, and there the *jhîwarî,* or some other menial, stands with a pot of water and some green grass. Both she and the *nain* are paid for their services.

In the outer room Vidhâtâ (vulg. Bidh) Mâtâ is worshipped, no men, not even a Brahman, being present. The women make an idol of *gobar,* covering it with a red cloth and offering to it the food cooked for the feast. Drums are then beaten, Brahmans and relatives fed, and the members of the household congratulated. The idol is kept for one and a quarter months and then deposited near the well.

The period of confinement lasts forty days, and the mother must not stain the palms of her hands with henna, nor wear clothes dyed with *kasumbha,* until the ancestors have been worshipped and kinsmen feasted. On this occasion the *dhiâṇis,*[3] or girls born in the tribe, must also be fed, fee'd and reverenced.

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[1] Probably because the plough turns the soil which produces grain, and so witches will not come near it.

[2] In Panjâbî *bêlnâ* or *vêlnâ* = to press or roll; also to strike the bridegroom's hand at a wedding. *Bel mârnâ* is not traceable in the *Panjabi Dictionary.*

[3] Or *dhiâhaṇ* or *dhiâṇ,* a sister or daughter. The term is used by Brahmans, *mîrâsîs,* etc., in addressing the daughter or sister of a patron.

Third day.—On the third day the observance called *bâhir* is current in Rohtak, and, as the name denotes, the mother on this day comes "outside," from the room in which she was confined, at an auspicious hour fixed by a Brahman. The women of the brotherhood assemble at her house, each bringing half a *pâo* of grain. The *nain* makes a *chauk* on the ground, in which are depicted the planets. The eldest woman of the family then puts five *sers* of grain, some jaggery and oil on the *chauk*, and all the others follow suit. Then the mother comes out of her house and touches the grain, which is divided, with the jaggery and oil, between the *nain*, the Brahmanî and the midwife. A *chhatâk* of jaggery is then given to each female of the brotherhood present, and songs are sung. Menials also get their dues, and, when the mother comes out of the house, the *nai* waits at the door with a *nahernâ* with which he touches the boy, for which he gets a rupee. He also puts blades of *dabbh* grass in the turbans of the child's forbears, in order that they may multiply like the grass. For this he receives a second rupee.

In Hoshiârpur the mother in some places is bathed on the third day, if she has given birth to a girl: a function postponed to the fifth day if her child is a boy. In Sirmûr, too, she bathes on the third or fifth day; and in Mandî a rite called the *tirphal kâ gontar*[1] is observed on the former day. In Râwalpindî the mother bathes on the third, fifth or seventh day, and *chûrî* (baked bread, sugar, and *ghî*) is then distributed among the females of the brotherhood. In the evening of the same day she puts the child in a winnowing basket and takes it outside the village gate—accompanied by the midwife.

Fourth day.—As a rule the mother bathes on the third day, or on one bearing an odd number after it, but in the Dasuya *tahsîl* of Hoshiârpur she is bathed on the fourth, seventh, thirteenth, twenty-first, thirtieth, and forty-eighth days.

Fifth day.—Excluding the bathing already mentioned, the rites of the fifth day are confined to Jhelum, in which district and Hoshiârpur the *panjwân* or fifth-day observance simply consists in a bath. In the latter district a foster-brother is made for the child out of cow-dung, and grain, sweets and bread placed beneath it. A red cloth is then thrown over it. All these things are the midwife's perquisite. The rite is performed both for a girl and a boy. The mother also bathes on this occasion, and her head is washed with milk and cow's urine. Elsewhere in this same district the mother is bathed on the fifth or seventh day, and the *nain* plaits her hair. Then she is brought out into the courtyard, wearing the *nain's dopaṭṭa* or shawl. The yard is previously plastered with cow-dung, and in it the mother is seated on a stool, and given cow's urine and Ganges water to drink. She then re-enters the room in the house, which has in the meanwhile been re-plastered with cow-dung. Inside she sits by a wall, close to which is placed some grain on which a lamp is lit. Each of the kinswomen then brings some grain and money and puts them by the lamp. Then rice, loaves and *mâsh* are distributed among the brotherhood, the grain and money brought being divided by the midwife and the *nain*.

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[1] This rite is thus described: The courtyard of the house is swept, and circles drawn on it with mud. These circles are called *makol.* The threshold of the house is painted red. The person who sweeps the yard gets *pûṛâ tar* (rice, sugar, cash, etc.). Then the mother is bathed in hot water and made to worship Ganpatî, whose idol is put on a yellow *chauk*, and offerings made to it. A Brahman now makes *panchgabh*, mixing it up in a jar with a blade of *dabbh* grass. He gives three spoonfuls of this mixture to the mother, and thus removes her impurity. He next receives his fee in money, and then places a ball of cow-dung, containing gold, silver, a pearl, and a bead of coral, near the idol. This ball is called *biyâhî*, and is worshipped like the goddess. After all this, the mother's breasts are washed and she suckles the child. Then balls of boiled rice are placed daily in the *chauk* for three days—until the impurity has been removed—and are then given to the midwife. The mother's brother then goes to the forest with a Brahman and a musician, and cuts four branches from a *thohar* (Euphorbia Royleana), and these he is made to worship by the Brahman, Tho receives a fee for this from the mother's brother. Of these four branches the Brahman places two, one on each side of the door of the house in which the birth took place, and sticks two in cow-dung near Ganpatî's *chauk*. They are then covered with a red cloth. The mother's brother's forehead is then marked with the *tilak*, and the nearest kinsmen are fed. Songs are also sung. The eldest matron of the family also gives the mother rice mixed with salt, a dish called *pichhlagṛâ.* (*Pichchh* = rice water.)

Sixth day.—The ceremony called the *chhaṭṭî* was doubtless originally, as the name implies, observed on the sixth day, but it is now extinct (in Sirmûr), or else held on the sixth or any subsequent date.[1] Only in Mandî must the rite called *chhaṭṭî gontar*[2] actually be held on the sixth day.

Elsewhere the *chhaṭṭî* is known as the *dhamân*,[3] and is held only in cases when the child is a boy.

When the mother goes to her parents' house for her confinement the *chhaṭṭî* is observed on her return to her husband's house, and in Ferozepore it is in this case postponed till the twenty-first day.

In Ludhiâna the rite is simple. The mother is bathed (*chhaṭṭî kâ ushnân*), and boiled rice and sweets are distributed among the members of the brotherhood. The mother fasts all day until sunset, when she is given starch to eat, and then she is brought out of the room by the midwife with a lamp burning in the winnowing basket. After the sixth day the mother is not so carefully looked after.

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[1] In Gujrânwâlâ the *chhaṭṭî* is described as being observed on the fifth day, on which day the child is named.

[2] This resembles the *tirphalla.* The house is swept, as before, and Ganpâtî again worshipped. Then images of a cow, a calf, and a herdsman are made of brass. These are known as *dand wachhâ*, and are placed near the goddess' idol. *Panchgabh* is given to the mother. The females of the brotherhood assemble and sing songs. They are regaled on moist grain, and red thread is then sent to the mother's parents, a custom called *ḍorî denâ*, or "giving the thread." In return they send money and sweetmeats. In Mandî is also performed the third or last *gontar.* On the evening preceding the day fixed for this rite, the house is swept. All the near kinswomen are invited, and they spend the night in singing, while the priest makes the mother worship Ganpatî. Alms are also given to avert evil planetary influences. On the following day the priest performs a *hawan* (*hom*), in much the usual way. The mother and all the members of her family are then purified, and finally a *biyâhî* of cow-dung is made, and the mother instructed to clean her teeth with twigs of a fragrant plant. These twigs are stuck in the *biyâhî* and preserved as long as the child lives, being worshipped at its birthdays. The *biyâhî*, with the twigs stuck in it, must, at this *gontar*, be set afloat on a river or stream.

[3] According to the *Panjabi Dictionary*, *dhamâṇ* or *dhamâṇh* in Potohârî means "the period of child-birth." Possibly the word is really *dhammâṇ*, and is derived from *dharmâ*, and so means simply "rule" or "due observance."

In Amritsar the *chhaṭṭî* is said not to be observed by Brahmans or Khatrîs, but only by Arôṛas.

In Montgomery the *chhaṭṭî* is termed *sathî*,[1] and the Brahman suggests the boy's name—no such observance being required for a girl.[2]

In Rohtak and Lohâru it is said to be the occasion on which the goddess of fortune will visit her house and partake of grain and water therein, so water is set forth, and pen, paper and ink placed ready for her to record a happy future for the child.

The kinswomen and the priest's wife sing songs all night, the idea being that the goddess will record a better fate for the child if they are awake and a lamp is kept burning. After this the mother is allowed to eat grain, and the child is dressed in a *kurta* and cap, and ornaments are put on it. If it is a boy, mango or leaves are hung on the door of the house, and *thâpâs* or hand-prints made on either side of it in the corners, with henna.

Special care is taken that the sounds of mourning may not reach the mother's ears if a death occurs in the neighbouring houses.

Dhamân.—In the Hazro tahsîl of Attock the term *dhamân* is applied to the custom whereby the mother keeps her bedding on the ground. On the first Sunday or Thursday after the birth, mother and child are bathed and dressed in new clothes. They are then placed on a *chârpai.* Sweet porridge is also distributed among the brotherhood on this day. If during the *dhamân* period thunder is heard, a pewter vessel is beaten, lest the sound of the thunder reach the mother's ears.

Seventh Day.—The *satwân,* or seventh-day observance, is only known by that name in Jhelum and Râwalpindî, in which districts it consists merely in a bath—as in Hoshiârpur—in lieu of or in addition to those previously taken.

Tenth day.—The tenth day is not generally marked by any special rites, in spite of the fact that it gives its name to the *dasûṭhan* (lit., bathing on the tenth day after childbirth).[3] In Sirmûr it is also called *sondhia*,[4] and is observed at any time before the child is five years old.

Dhamân.—In Siâlkot the *dhamân* rite is observed on the eleventh day by Brahmans, and by other castes on the thirteenth, *i.e.*, after the *sûtak* is over. Four copper coins and an idol made of cow-dung are placed under the mother's feet. After bathing and putting on new clothes the mother worships a lamp, placed before the idol on a pile of grain (which is the midwife's perquisite). Each woman of the brotherhood then gives her a coconut and five dates. She is then taken to the kitchen, where a Brahman administers the *panchgabh,* receiving a fee of annas four or eight, and a meal. Lastly, the idol is taken away outside the village and placed under a plum tree. On this same day the child is invested with the *taraggâ,*[1] a thread on which are strung a cowry, an iron ring, another of green glass, a tiger's claw, and a piece of the child's umbilical cord, cut off after its birth. The kinswomen are also feasted on this occasion. In the Dogaṛ country this thread is made of silk.

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[1] By corruption, apparently. There may, however, be some connection with *satya*—see *ante.*

[2] In this District, the *dhamân* appears to be observed, as a distinct rite, on the first Sunday or Wednesday after the birth.

[3] See Platts, *sub voce.*

[4] *Soudhia* is a word not traceable in the Dictionaries, but it is probably derived from *soūdhuâ*, to rub or wash out.

Thirteenth day.—The thirteenth day is important, because the *sutak* period very commonly ends on that day, and it is therefore signalised by rites of purification. Very generally the mother is bathed, all the earthen vessels in the house are broken[2] or replaced, and those of metal are cleansed. Clothes also are washed, and the house plastered. Brahmans are sometimes fed, and occasionally the child is named on this day or dressed for the first time.

Twenty-first day.—The twenty-first day is merely marked in Hoshiârpur by bathing the mother and purifying by fire all the vessels used by her since the birth.

Thirtieth day.—The thirtieth day is only the occasion for a bath, in Hoshiârpur.

Fortieth day.—On the fortieth day the mother bathes for the last time, and then ceases to be even ceremonially impure, and can take part again in the duties of the family kitchen. Strangers also can now take food from the house.

The chûṛâ karam.—In Mandî an observance called the *chûṛâ karam* or *jarôlan* is held in the third or fifth year of the child's life in Mâgh, Phâgan, Baisâkh, Jêth or Hâr, which months are auspicious for it. Two children must undergo the rite together. All their relatives are summoned the previous day. On the day fixed a *chauk* is painted red, and over it is placed a platter, made of cow-dung, and containing four hollows, one of which is filled with cold water, another with hot, a third with milk, and a fourth with curds. In each a little Ganges water is also poured, and a bundle of *dabbh* grass is placed on the platter. A little oil is then dropped on the children's heads, and their bodies are rubbed with *baṭnâ.*[3] They are next bathed, and the eldest matron of the family passes sweets round their heads to avert evil spirits from them. Then they are made to reverence Ganpatî, and the priest parts their hair into three, tying each with red thread. A young girl is then told to apply all the contents of the platter, with the *dabbh* grass, to their hair.[4] Brahmans are then fed. Next day at dawn the priest makes the two children worship the nine planets, and then he receives his fee in money. Oil is then poured on their heads and the barber cuts their hair, which must fall into the mother's skirt.

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[1] Like the *tagâdhri* in some parts, and probably the *sûtrâ* in Amritsar, the *taraggâ* appears to foreshadow the *juneo*, and to be a stop-gap for it during childhood, until the child is of an age to be invested with the sacred thread. For *taraggâ*, cf. *tarâgarî*, or *tarâgî* (*taṛ*- also), which means a string tied round the waist : a string or silver string worn round the waist of men or boys, especially Mârwâris (*Panjabi Dictionary*, p. 1106).

[2] This is not done in Amritsar, in which District the room is simply cleansed.

[3] Hindi *ubṭan*, a paste made of meal, turmeric, oil and scent, used to clean and soften the skin.

[4] This rite is called *jaṛâ senchnâ.*

The barber is paid his due. The mothers offer the hair at the temples of their family goddesses. Then the children are bathed and dressed in new clothes, their brothers' wives, or their sisters, painting their eyes with antimony. A goldsmith then bores their ears and puts gold ear-rings in them, receiving a he-goat and some cash as his fee. Copper coins are finally distributed among the poor, and a feast given to the Brahmans and near kinsmen.

Well worship.—In Rohtak, a month or so after the birth of a boy, a rite called the *dôghar pûjâ* is observed. If the mother is very weak the other women of the house place a jar of water by her, and they themselves visit the nearest well, singing songs as they go. The well is worshipped, rice and *dabbh* grass being offered to it. On their return copper coins are given to the menials. Or if the mother cannot perform this rite herself, it is observed at home. In Ferozepore the mother goes, on the twenty-first day, to a well, and there distributes boiled barley amongst children.

Suckling.—Suckling the child for the first time is the occasion for a curious rite. At sunset the midwife washes the mother's breasts with water, using some blades of *dabbh* grass as a brush. They are again washed by the child's sister, or some other female. The midwife gets annas two or four, the sister a rupee, for this. Next day the midwife brings some green *sarîn* leaves and ties them with a *mauli* thread to the house door—a fee of annas two or four being paid her for this also. In Ferozepore the child is not suckled till the evening after its birth, and then the mother's breasts are washed by a young girl, who gets a rupee if the child is a boy, but only annas two or four if it is a girl. Jaggery is applied to the child's lips before it is given the breast. If the milk does not flow freely the child is given sheep's milk.

Fosterage.—Fosterage is not very common in the Punjab, and sometimes it is a mere concession to superstition, as when a Brahman declares that it is inauspicious for a mother to see her child, it is put out to nurse, if the parents can afford it.[1] The people in the submontane tracts, however, sometimes employ Gûjar women as wet-nurses, the object being to ensure the child's health.

Head compression.[2]—For some notes on this practice in the Punjab, reference may be made to *Man*, 1902, No. 2.

Cholâ.—The ceremony of clothing a child for the first time is usually called *cholâ*, and is held on various dates. In Râwalpindi a Brahman fixes a day; in Amritsar this is the usual custom, but often Aroṛas and Khatrîs hold it on the thirteenth day.

In Ferozepore the *cholâ* ceremony is elaborate, and is thus described:—A part of the house is plastered and a figure of a cow made by the midwife—both with cow-dung. This image is covered with red cloth and designated the Bidh-mâtâ, or "goddess of fortune." Next the barber brings cow's urine in a cup, in which he also puts some blades of *dabbh* grass. Then the mother puts on the barber's shoes, and, holding his skirt in her hand, she reverses the Bidh-mâtâ, her children sitting on her lap. Two copper coins, the barber's perquisite, are also placed beneath her feet. The barber now applies the cow's urine to the child's lips, with the *dabbh* grass, and then gives it to the mother, who is thus purified, as is the child. If the latter is a boy the parents place a rupee in the cup, but if it is a girl annas two or four suffice. *Pinjîrî* and lumps of parched wheat are distributed to the brotherhood, and the females belonging to it place grain before the image of Bidh-mâtâ. This grain is divided between the barber and the midwife. The mother is given strengthening food after this. The ceremony[1] appears to be usually observed on the thirteenth day, but this is not always the case.

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[1] Temple (in *Proper Names of Punjabis*, p. 27), moreover, says that a child is given sometimes to a Chûhrâ (sweeper) woman or to a Muhammadan to suckle—apparently to avert evil.

[2] It has been suspected, not without reason, that the *chuhás* or "rats" of the shrine of Shâh Daula in the Gujrât District in the Punjab are children whose heads have been artificially compressed, but many, if not most of them, are undoubtedly microcephalous idiots. The present writer hopes to publish a full account of this shrine shortly.

In Montgomery the *cholâ* also takes place on the thirteenth day, but if the boy was born on one of the six unlucky asterisms, the observance is postponed till the twenty-seventh. In Gujrânwâlâ, however, the *cholâ* is held as early as the first day, *i.e.*, immediately after birth, or on any day till the thirteenth. Speaking generally, the customs connected with the rite are social rather than religious, but in Hoshiârpur the family god's temple or some Muhammadan saint's shrine is usually visited.

Naming Customs.—In some parts, *e.g.*, in the Himalayan valley of Kullû, it is customary to mark a child's forehead with charcoal until it is given a name, in order to protect it from evil spirits; but this custom is confined to the higher castes.

The naming of a child is a regular Hindu rite, and is called *nâm karan sanskâr* in Siâlkot. It is performed in many different ways[2] even in the same locality, and at various times. Sometimes it is performed in connection with the *cholâ*, as in Amritsar, or after the *dhamân*, as in Ferozepore, but no precise time is specified, although, in cases where a Brahman is called in, the thirteenth is the most usual day. As a rule, the rites observed are simple. The child's name is chosen by the oldest representative of the family, or ascertained by astrology, or by simple rites of divination. Thus in Hoshiârpur the *paṇḍit* takes five bits of paper, on which he writes as many names, rolls them up, and puts them in a jar. A young girl is then worshipped and a *tilak* applied to her forehead. She then draws a name, and the observance ends with the distribution of sugar among the assembled brotherhood. This is done on the thirteenth day, but any day before the fortieth, or even before the child is six months old, will serve. In Ferozepore the family choose the name for themselves, or at least select one of several suggested by a Brahman after casting the child's horoscope. In this District the mother goes to a well with the child on this occasion, and then distributes boiled barley among children, bringing back with her a pitcher full of water, for which service the Jhîwar gets a rupee. He and the barber, priest, and midwife get a cloth each at this observance. In Amritsar, where the rite is called *sûtrâ*,[1] the mother's parents send her clothes and sweets, and threads are tied on the child's wrists as soon as the period of impurity is at an end. The Brahman announces the first letter of the name after an astrological observation,[2] and the father's sister is the first to call the child by name. On her, too, devolves the task of choosing the name if there be no Brahman.

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[1] The accounts of the *cholâ* rite are very confused, because *cholâ* literally means a cloak, and the child is dressed in that garment on other occasions, *e.g.*, on the fifth, seventh, or ninth day; when the mother is bathed, the child is dressed in a yellow *cholâ*. And a boy, born after several successive female children, is dressed in one made of cloth, which must be given by a friend (Ferozepore). But in Râwalpindî the cloth is got from a friend or the mother's relatives under any circumstances.

[2] In Mandî a girl is named in the fifth and a boy in the sixth month, on an auspicious day fixed by a Brahman. The house is cleaned and the threshold painted yellow. The kinswomen are invited in the evening, and they sing songs throughout the night, *dûms* and *mîrâsîs* being also called in. The priest makes a *chauk*, and on it places an effigy of Ganpatî, which, with the nine planets, the child and its mother worship. The priest receives a fee in money for this. At dawn the father gives the child a *dhotî*, a *janeo* and a nut, a gift called *dbarnî*. *Hawan* is then performed, and the child is clad in new clothes. The name chosen is then written on a poplar leaf and whispered thrice into the child's ear by another child. *Khîr* of the roots of grass is then made and some of it given to the child by a young girl with a coin of gold or silver. A gold ring is also put on its finger.

As a rule, a girl's name is merely chosen by the women of the family without any ceremony.

Nomenclature.—A volume might be, and a small book[3] has actually been, written on the proper names found among the people of the Punjab. The time or season of the birth often determines a boy's name, *e.g.*, Mûl Chand for one born under the Mûl asterism; Salêkh Ram (Salekhu), born under the Shlêkhân; Itwârî, born on a Sunday, and others.[4] Similarly, many names are derived from months, such as Sâwan Mal, Jeṭha Mal, Chetâ, Baisâkhi, etc. As in the rest of India, from Peshâwar to Cape Comasin, opprobrious names, designed to avert jealousy, the evil eye and ill-fortune, are numerous. Thus, a boy born into a family which has had no sons, or in which the boy-children have died, is called Ghasîṭu, Ghasita or Aṛûṛa, and on his birth he is placed in a winnowing basket and dragged in it. His head, too, is shaved from the middle, a custom apparently resembling that found among the Muhammadans, who shave only half a child's at a time to avert misfortune from it. Many other proper names are based upon rites and superstitions. Thus, the child redeemed from a *faqîr* may be named Faqîriâ, Khairâtî (fr. *khairât* alms); Chûhṛû,[5] etc. (fr. Chûhṛâ, *i.e.*, one weighed against grain given to a "sweeper"): Chhajjû (dragged in a "winnowing basket"); Ghûrâi and Meṇḍû (from the custom of burying the umbilical cord in a "dung-pit" or "field boundary"); Bûr, etc. (lit. "crop-eared," when the mother cuts off a piece of the child's ear and eats it); Nathû, etc., Bulâqî or Chhedâ[6]

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[1] Lit. "thread."

[2] Each *nakshatra* consists of four letters, and the name must begin with one of these.

[3] Temple, *Proper Names of Panjabis*, Bombay Education Society's Press, 1883.

[4] *Ibid.*, p. 39.

[5] But this name may be referred to the custom of 'employing Chûhṛî women as foster-mothers, see p. 232 *supra*.

[6] *Nath*, a nose-ring: *bulâq*, nose-stud; *chhedaṇ*, to pierce.

(from the custom of piercing a boy's nose and dressing him as a girl). Many children are named from the deity or saint to whom they were dedicated before birth, such as Gûgan, "vowed to Guggâ," Zâhirîâ, "dedicated to Guggâ (Zâhir Pîr)," and so on.

Chhuchak.—In Rohtak the mother's parents send her clothes and ornaments for herself, the child, and her husband. This present is called *chhuchak*, and it is sent in response to the *badhâî*.

Festivals.—The Lohṛi following a birth is observed with special pomp, copper coins and cowries being given away to the poor.

So, too, the next Diwâli is celebrated by a grander illumination than usual, sweets being also distributed among the brotherhood.

Tonsure.—The first tonsure of a child is an important rite, but it is known by various names and celebrated in various ways by different castes[1] and in different localities. In the south-west it is known as the *jhaṇḍ*[2] and in other parts as the *mûṇḍan* or *bhaddan*.[3] If the mother has made a vow prior to the birth of her child to observe the rite at a certain shrine or temple, it is duly carried out there; otherwise it may be done at home.[4] An auspicious hour should be fixed by a Brahman, or the rite should be performed on the marriage of a near kinsman, or on the Baisâkhi or Dasehra. In Hoshiârpur[5] a boy's ears are bored on this occasion, and some people smear his forehead with goat's blood. In Ludhiâna the rite is, like the birth observances, described as the *mûṇḍan sanskâr*, and it is unlucky to shave a child's head until it has been performed.

The menials receive fees, and the brotherhood is regaled with sweets prior to the first tonsure, and a day or two afterwards the barber shaves the child's head, after which the *bodî*[6] or tuft of hair is allowed to grow,[7] but it is more usual to let the *bodî* grow only after the marriage of a near kinsman.

As a rule the rite is performed between the ages of one and a quarter[8] and four years, or, in Ferozepore,[9] as soon as the child has cut its teeth. Sometimes the rite is repeated once or twice. In Gujrânwâlâ the observance is called *rît* and is held in the third or fifth year.

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[1] The Hindu Bânias of Mahrâj in Ferozepore have a special time for the rite, viz., the light halves of Asauj and Chet, and a lock of the hair is then left uncut.

[2] *Jhaṇḍ*, lit: *lanugo*, or down, is the hair on the head of a new-born child.

[3] *Mûṇḍan* = *muṇṇâ*, to shave. *Bhaddan*, s m. = shaving.

[4] Some sections have fixed places for the observance of the rite, *e.g.*, the Khanna Khatrîs observe it at Dipâlpur. In Râwalpindî, most of the Khatrîs observe it at home, but not so the Jaggi and Awal sections, and some families observe it at Katâs in the Baisâkhî, or at the Jogî shrine at Kot Sarang.

[5] But in this District a distinction appears to be drawn between the cutting off of the *jhaṇḍ*, which is removed at a tank or under a *jand* tree, before the child is three (though only a few families observe this rite), and the regular *bhaddan*, which is performed at a *ṭhâkurdwâra* or *gurdwâra* between three and five years of age, and is often celebrated with considerable pomp. [6] *Buddi*, syn. *munṇî* or *rakhṇî*.

[7] In Ferozepore the *bodî* is allowed to grow on the Baisâkhî or Dasehra, and in Râwalpindî on the seventh day after the *jhaṇḍ*.

[8] One account puts the minimum age at five months (Ferozepore).

[9] It is stated that in this District some people shave the child on an auspicious day *without informing the parents.* If this is so, comparison may be made with the idea that (unlucky) children should not see their parents.

In short, the observance is essentially a domestic usage, varying in its details according to the ancestral custom of the caste, section, or even family. Sometimes women vow that a child's hair shall never be cut (Montgomery), and a girl's hair is never cut. Among Sikhs the rite is not very common, and, if practised, is observed when the child is only two or three months old. In a well-to-do family the rite is the occasion for a feast to Brahmans, otherwise Brahmans appear to have no part in it.

The " janeo " *or sacred thread.*—For an account of the ceremonies connected with the sacred thread in the Punjab, reference may be made to the *Indian Antiquary*, vol. xxxi, 1902, p. 216.

NOTE.

One of the main difficulties experienced in investigating these multifarious loca customs in the Punjab is the want of adequate dictionaries, especially of dialects like the Pahârî or languages spoken in the Shiniâlayas. Many words are not traceable in the existing dictionaries. A Glossary of the commoner words, not explained in the text, is appended, p. 260.

MUHAMMADAN BIRTH OBSERVANCES IN THE PUNJAB.[1]

BY H. A. ROSE,

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WHEN the birth-pains commence, *Bîbî Mariam kâ panjâ*,[2] a leaf whose shape resembles that of a hand is put in a jar of water. As delivery approaches, the leaf opens out, and as it does so the birth takes place. This observance also, it is believed, facilitates the delivery.

Sayyids and *faqîrs* also indite charms, which are tied round the patient's waist, or sometimes a Muhammad-Shâhî rupee, on which is inscribed the *kalima*, is put into water, which is then given her to drink. In Kâṅgṛa the *bâng*, or call to prayer, is pronounced in the room set apart for the confinement by one of the men of the family, the call being a prayer used in any time of trouble.

Birth Ceremonies.—As among Hindus, delivery is usually effected on the ground,[3] the mother being made to lie on a quilt with her head to the north and her feet to the south. She thus faces Mecca, and if she dies in child-birth she expires in the posture in which Muhammadans are buried.

If the child is a girl, the parents give some grain in an old black *hâṇ-ḍî* (an earthen pot) to the midwife. But if the child is a boy they give her a rupee, and the relations present also give her money, called the *wel*, according to their means.

Whether it be the hot or cold season, the mother remains in confinement for one week. If in good health she is bathed on the eighth (or sixth) day, provided that it is a Friday, or Wednesday, or a Monday, the latter being the day on which the Prophet was born.

During the actual confinement only those women who are closely related to the patient are allowed to be present, but her mother is sure to be one of them. Some stand in the courtyard in the open, with out-stretched arms, and, looking upwards, pray: *Ilâhî ! is kî mushkil âsân hô !* ("God! grant that her troubles may be lightened !"); others vow *daunâ* (sweets put in cups made of folded leaves) to Mushkil-kushâ.[4] Meanwhile the midwife tells the mother: *Jheli do, jheli, i.e.*, "bear down." Such are the usages in Delhi, but in Hissâr they are different. There the patient is seated with a piece of cow-dung under each foot, and as the time of delivery approaches she is made to lie down on a bed with a copper coin under each of its four legs, two in the name of Halîma, the midwife, and two in that of Ali. Further, four heaps of grain, costing five annas, are put in the names of certain saints on the floor of the room.

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[1] This paper is a continuation of that on Muhammadan Pregnancy Observances in the Punjab (*J.A.I.*, xxxv, p. 279).

[2] This leaf is said to be imported from Arabia. But one account speaks of it as a kind of grass or piece of wood shaped naturally like a hand, obtained from Arabia : *panja* = fist.

[3] But in some parts, *e.g.*, in Jînd and Karnâl, she is allowed to lie on a bed.

[4] Ali, the son-in-law of the Prophet, is so called on account of his humane qualities.

A child born feet foremost is called a *pa'el,* and people believe that a few gentle kicks from one so born will relieve pains in the back.

As soon as the child is born the mother is told that she has given birth to a one-eyed girl, in order that the heat engendered by this ill news may force out the after-birth quickly, and that the joy of having given birth to a male child may not retard it.

Immediately after the child has been born its umbilical cord is tied up with *kalâwa,* a bit of thread dyed red and yellow, and severed with a knife, the thread being thrown round the child's neck[1] until the rest of the cord falls off. The part actually cut off is buried in a pot inside the house,[2] a charcoal fire being kept burning on top of it for six days until it is all burnt up. Into this pot the near kinswomen put annas two or four, as a present to the midwife. Some betel-leaf and silver are also placed in it, and, when buried, turmeric and charcoal are thrown in to keep off evil spirits. The cord of a *pahlaunthî,*[3] or first-born child, is invariably so buried, but if a woman's children do not live, she has it buried outside the house. The midwife now gets her *nâl kaṭâî,* or fee, for cutting the cord, in money; but among the wealthy the mother's parents and her husband add gold or silver bracelets, according to their position.

In Amritsar and Gûjrât the parents' or mother's formal permission to the severance of the cord must be obtained by the midwife. But in Râwalpindî the eldest and most respected woman of the family takes up the child as soon as it is born in order to communicate her own virtues to it. She also buries the secundines on the spot where the birth has taken place, and cuts the cord, which is preserved with great care. The Ghebas do not use a knife to cut the cord, but a *nalla,* or spindle, obtained by the midwife from a weaver's house. With this the midwife cuts the cord, after pressing it with her feet, and then buries it in the ground.[4]

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[1] This is also done in Lahore.

[2] People are believed to be deeply attached to the spot where their navel-string is buried, so that to say to a man: "*Yahân terâ nâl to nahin garâ, jo tu jâne kâ nâm hi nahîn letâ?*" is "Is your cord buried here that you do not even talk of going?"

[3] The first-born child is supposed to be peculiarly susceptible to the influence of genii, evil spirits, lightning and the evil-eye.

[4] The Khattars of Râwalpindî have the uncut part of the cord, after it has dried up and fallen off, encased in silver and hung round the child's neck as a charm against stomach-ache.

Throughout the south-east Punjab, the umbilical cord is carefully buried, often with the after-birth, in an earthen vessel (*ṭhîkrî*) in a corner of the house. In Hissâr, neither parent should touch the cord. In Kângra, the midwife cuts the cord on the coin which she gets as her fee. Besides this she receives presents from the kinswomen, etc., and these are called *nâr kaṭâî.* Among the Kashmiris only the secundines are buried, the piece of the cord cut off being kept to cure the child if it gets sore eyes. In Amritsar the uncut piece is preserved with the *jhanḍ.* In Dera Ghâzi Khân the cord is carefully preserved and buried on the right of the house-door. In Multân it is buried where the birth took place.

After birth a child is bathed, its head being pressed to give it a round shape,[1] and tied up in a *qasāba* or handkerchief folded in a triangle. The nose also is pressed to prevent its hardening on exposure into a bad shape.

The *mullâ* is next sent for without delay. He repeats the *subh kî azân*[2] in the child's right ear, and the *takbîr* in its left. *Batâshâs* chewed, or something sweet, are also applied to its palate.

The *mullâ* receives a gift.[3] After bathing, the child is made to lick honey, and then the *ghuṭṭî* is administered.

After the *ghuṭṭî* has been given, *i.e.*, on the third day, the child's father's sister[4] washes the mother's breasts with milk or with water squeezed out of kneaded flour,[5] and then her hair, in which some green blades of grass are woven. The following song is sung by her or on her behalf:—

Biran, bhaiyâ, maiṅ terî mâ kî jâî,
Hôlar sunkar, badhâwa lekar âî,
Biran, bhaiyâ, maiṅ terî mâ kî jâî:
Chhâtî dhulâî, kaṭôrî lungî, to lat dhulâî, rupaiyâ,
Pauṅ dhulan ko, cherî lungî; to khasm chaṛhan ko, ghoṛâ.

Translation.—"Brother! I am thy mother's own daughter, and hearing that a son has been born into the family, I have come to felicitate thee. For having washed the breasts, I expect a silver cup as a present, and money for washing her tresses. I will accept from thee a hand-maiden to wash my feet, and for my husband a horse to ride."

For this observance the father's sister receives a *neg*, varied according to her brother's position, but not less than rupees 1 annas 4.

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[1] This is also done in Hissâr, but neither there nor in Delhi is any vessel used to force the head into a round shape.

[2] "The morning call to prayer." But usually the *azān* pure and simple is specified (for this see *Hughes' Dictionary of Islām*, s.v. *Azān*). The usual synonym for *azān* is the P. *bāng*, lit.: a call, or cock-crow. In the south-east of the Punjab it is whispered, in Bahâwalpur repeated in a loud voice, and elsewhere recited or repeated apparently in the ordinary voice.

[3] His fee varies, depending mainly on the child's sex. If it is a boy he gets a rupee or more, with some flour and sugar; if a girl, only an anna—in Hissâr. Sometimes he whispers the call to prayer through a *narâ* or tube; and, if the child is a girl, he sometimes whispers the *takbîr* in both its ears, not the *bâng*. If a *mullâ* is not available, any man of reputed piety may perform the rite, receiving some sweetstuff only, not a fee. In Karnâl a man of good repute is called in to perform it on the third day, and he receives no fee, but sweets are distributed. Or the eldest male of the family may perform it in lieu of a *mullâ*. In Kângṛa this duty devolves on the child's uncle, or any pious member of the family. In Mâler Kotla the rite is administered with considerable solemnity. A woman stands with her back towards Mecca, holding the child so that it may face the Qibla. As the *mullâ* repeats the *azân* she turns its right ear towards him, and then its left as he recites the *taqbîr*. Until the *azân* is thus repeated, the belief is that the child is convulsed with fear. In Jînd some juice of the date is poured into the child's mouth, if it is a boy, in token of welcome.

[4] She is called *dhiyâni*. But in Siâlkot the breasts are washed by the *nain*.

[5] Called *aṭe kâ dudh*, or milk of flour, and it is used because amongst Hindus it would be a sin to throw the milk, after it had been used for washing, on the ground.

From the time the child is born a knife, sword, or piece of iron is kept under the mother's head, to ward off evil spirits.

On the sixth day the husband's sisters make and distribute the *achhwânî*[1] amongst the relatives and receive a present in return ; but amongst the poor the mother alone is given *achhwânî.*

For six days the mother is never left alone, partly lest she overlay her child, partly to keep off evil spirits. Amongst the well-to-do a lamp is kept burning continuously for forty days (but only for six among the poor), and a stove is kept alight, in hot weather or cold. Wild rue is also burnt for six days, to keep off the evil-eye and purify the air. Lest the mother sleep on, and her blood so stagnate and get cold, women take it in turns to sing *jachâ-giriâṇ* or birth songs, of which the following are examples:—

1. *Mere bābal ko likhīo sandes, jhaṇḍūlā aj hūā :*
Bābal hamāre, rājā ke chākar ; bīran, bāle bhes :
Jhaṇḍūlā āj hūā.

"Tell my father that his daughter has borne a son : my father is a servant of the rājā, *i.e.*, he is well-to-do ; and that my brother is yet a child : the young one was born this day."

2. *Áj janam līyā mere rāj dulāre ne, pālnā banāūngī, rī, pālnā banāūngī !*
Ghī, khīchṛī bhejī, bābal, Hubraṇg, sughaṛ jachā ko maīṇ tāre dikhāūṇgī,
rī, pālnā banāūṇgī !

"The beloved of my kingdom, my prince was born to-day. I will make a cradle for him to sleep in, dear women ! I will assuredly make a cradle for him ! My father, having heard this news, has sent *ghî* and *khichṛī* for me. Hubraṇg (the poet who wrote this song), says 'I will show the stars to this accomplished mother,' *i.e.*, I will perform the ceremony of the *chhaṭṭī.*"

3. *Jachā,*[2] *merī kāhe ko rūṭhī, maiṇ terā itr, khilaunā ri !*
Kaho to jachā rānī, dāi ko bulā dūṇ—kaho kone palaṇg bichhā duṇ—kaho thaī
thaī nāchūṇ.
Chorus—Jachā, merī, etc., etc.
Soṇth maiṇ bhūl āyā, ab la dūngā, ri !—hāth men kūndī, bagal men soṇṭā
lāyā, ri ! soṇth bhūl āyā, ri !
Chorus—Jachā, merī, etc., etc.
Tere holaṛ kā naukar, ae begam, maiṇ terā naukar, terā chākar, rī, soṇth
maiṇ bhūl āyā, ri !
Chorus—Jachā, merī, kāhe ko ruṭhī, maiṇ terā itr, khilaunā, ri !

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[1] *Achhwânî* (or *chha-* in Sirmûr) = caudle, Platts, s.v., where it appears to be traced back to *ajwain.* It may, however, be derived from *chhe*, six. It is given to the mother for six days. A cup of it is sent to every house in the brotherhood on the day of the birth (Hissâr), but not universally. The *chhawâni* (or *-a*) is also distributed among kinsmen and neighbours in Mâler Kotla, and in return they send money to the midwife, according to their means. It is also given to the mother, but only for three or four days. Its ingredients vary, and for delicate women *'unnâb* or jujube is substituted.

[2] *Zachchâ* or *jachâ* is the Hindustani term for "a lying-in woman" : see Platts *sub voce.*

This is a comic *ẓachāgīrī*—as if it were made by, and sung for, the husband. The husband addresses the wife and says: "Beloved *zachā*, why are you sulky with me? I am in truth your scented toy: if you require a midwife, I will send for her; if you desire a bed, I will make one for you in the corner—should even this not please you I will dance (*thāī thāī*)[1] to amuse you. I confess that I forgot to bring dry ginger for the *zachā-ḳhānā*, but I can go for it immediately, and bring it quickly—my hand was employed bringing the *kūṇḍī* (stone mortar), and under my armpit I had the *soṇṭā* (a heavy wooden club, used as a pestle), which were for your use—so you see, my dear, I could not help it: O, my queen! I am your child's servant—your servant—your own servant. Why are you displeased? No doubt, I forgot to bring the *soṇṭh* (dry ginger)."

4. *Albele ne mujhe darad dīyā—sāṇwalyā ne mujhe darad dīyā:*
Sāṇwalyā ne mujhe darad dīyā, pātalya ne mujhe darad dīyā:
Jāe kaho laṛke ke bāwa se, ūṇchi naubat dharāo, re!
Chorus—Albele ne, etc.

Jāe kāho, laṛke ke nānā se, raṇg bharī khichṛī lāo, re!
Chorus—Albele ne, etc.

Jāe kaho laṛke ke māmū se, haṇslī, kaṛe gharhāo, re!
Chorus—Albele ne, etc.

Jāe kaho, laṛke kī ḳhālā se, kurte, ṭopī, lāo, re!
Chorus—Albele ne, etc.

Jāe kaho, laṛke ke bāwā se, bhāṇḍ, bhagatye nachāo, re!
Chorus—Albele ne, etc.

"The fine, beautiful, nut-brown, slender child, to show his beauty in the world, has given me the pains of childbirth: go, and tell its father that he should proclaim its advent by a *naubat* (music on the upper storey or roof); have *nafīrī*[2] played, so that I may be rewarded for my pains by its soothing melody: and tell the mother's father of the child to arrange to bring the *khichṛī* with all due magnificence, for the *chhaṭṭī* (sixth day) is given by him: go, and tell the mother's brother of the child also to make ready the *haṇslī* (necklet) and *kaṛā* (wristlets), (*i.e.*, give orders to the goldsmith to prepare them): go also, and tell the mother's sister to have ready the *kurte* (shirts) and caps, for these are supplied by her: warn the father also that on this joyous occasion he must give us a dance by the *bhāṇḍ* and *bhagatie*.

This last song, though it is in reality the pæan of joy sung by Deokîjî on the birth of her son Krishna, is still sung among the Muhammadans.

The clothes worn by the mother at her confinement are given on the day of birth to the midwife, and are replaced by new ones on her *chhaṭṭi* or *chhilā*.

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[1] To beat time, as in music, and dance, clapping the hands "like a bear."

[2] A clarionet or fife.

It was formerly the custom that the lobe of that side of the ear by which the child was born was pierced, the object being that the child might live—women having a belief that the piercing of a vein in the ear is a preventive of mortal disease (presumably convulsions); further, with the same object, the end of the nose was also pierced on the same day and a nose-ring inserted: but this custom is now rare amongst the lower castes.

From the day of birth, the *nakṭī* ("nose-cut," or noseless one, *i.e.*, the cat) is not allowed in the mother's room, in the belief that she is possessed of genii, or, more probably, in order to protect the buried umbilical cord from any possibility of injury, and she is kept out till the *chhaṭṭī* or *chhilā*.

It is also worthy of remark that a *hījrā* (eunuch) goes daily to each *mahallah* (street) and cries *Huā betā? Kaun sā ghar jāgā?* (*i.e.* "Has a son been born?" "Which house has awakened?"). Some child, or the sweeperess of that quarter, informs him of the family in which a son or a daughter was born; going to that house he gets two pice for a daughter and four for a son, and informs all the *bhāṇḍs, bhaṇḍelas,* etc. (players, actors, buffoons, etc.): from that time the *bhaṇḍelas, zanānas hījṛās, shāh ṭaiyam-ṭaiyās, chūne-wālis, bhāṇḍs,* and *bhagatiase* of the town, all those whose business it is to sing, dance, play, or amuse, begin to come, and after singing or acting for an hour or two demand their presents and go away, only to come back again on the *chhaṭṭī*.

Ṭhîkrî.—All the females in the house at the time of the birth drop some coins, from one pice to two annas, into a *ṭhîkrî*, the lower part of an earthen jar, the first to do so being the patient's mother or mother-in-law. If any near kinswoman is negotiating a betrothal, she drops a rupee into the jar, and this renders the agreement irrevocable. This is called the *ṭhîkrî kî sagâî*. The money dropped into the jar is the midwife's perquisite. [Hissâr.]

Ghuṭṭî.—*Ghuṭṭî*,[1] or *janm ghuṭṭî*, usually consists of aniseed, dill, sugar, etc., but various other ingredients are added to it. Sometimes it is simply called *achhwâni* (dill), and sometimes a little honey or milk and sugar is used instead of it.

Whatever the ingredients may be, it is essential that *ghuṭṭî* should be administered to the child by the oldest and most respected matron of the family, in order that it may imbibe the fortune and virtues of the woman chosen for this function. If a child grows up ill-tempered its bad humour is proverbially ascribed to the *ghuṭṭî*.[2] In Ambâla, *ghuṭṭî* continues to be given for a day or two, and in Kângra for four days, or even longer if the child be constipated.

There is a curious belief in Dera Ghâzî Khân that the brain of a child, where brothers and sisters have all died in infancy, contains a worm which will be fatal to itself, so a bitter *ghuṭṭî* is administered to it, consisting of a decoction of *ishwar* (?) leaves and the dung of a black ass.

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[1] Called *guṛhtî* in Panjabi.

[2] On the same principle some people get a garment which has been used by a man of good qualities, and from it make a *kurta* for the child. Others get a respected member of the family to chew a date and place it in the child's mouth, an observance called *tahsîk* in Arabic.

The aqîqa or tonsure.—The *aqîqa* is an orthodox Muhammadan rite, consisting in shaving a child's head for the first time, on the seventh, fourteenth, twenty-first, twenty-eighth, or thirty-fifth day after birth, and in sacrificing two goats or sheep for a boy and one for a girl.[1] This simple rite has, however, been confused with, or influenced by, the observances proper to the *jhanḍ*; or, in places, it has never been adopted, or if adopted has become obsolete.[2] As a rule the *aqîqa* is celebrated within seven days of the birth.[3]

The child's head is shaved, and the weight of the hair in gold or silver given away as alms.[4]

The hair itself is carefully buried in the earth.[5] For a boy two he-goats are sacrificed and for a girl one.[6] The bones must not be broken, but carefully buried in the ground.[7] The flesh is distributed[8] among the brotherhood uncooked; or else they are feasted on it.

But the child's parents, and its parents' parents,[9] must not eat of the flesh. Such are the main outlines of the rite.

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[1] The meaning of the word *aqîqa* is disputed. It may mean (1) the hair on a new-born child's head, like *jhanḍ*; or (2) be a derivative of the root *aq* (to cut or sacrifice). Even amongst orthodox Muhammadans the observances vary, *cf.* the *Mishcât ul-Masâbih*, Mathews, II, pp. 315–6.

[2] In Bhawânî it is only observed by well-to-do people, never by the peasantry, *eo nomine*, but on the *chhaṭṭî* the child's head is shaved. Occasionally a vow is made that the child's head shall not be shaved unless and until it can be done at a specified place. Or part of the hair is left uncut, to be subsequently shaved in fulfilment of the vow. In Siâlkot the *aqîqa* is displacing the old *dhamân* rite.

[3] It is very commonly held on the *chhaṭṭî*, or on the seventh, fourteenth, twenty-first, or twenty-eighth, in Hissâr; on the seventh or tenth in Bhawânî; on the seventh, fourteenth, or fortieth in Sirmûr; at any time within six months in Kângṛa, very commonly on the fifth, or in Nurpur, on the eighth; in Mâler Kotla on the sixth; on the seventh, eleventh, or twenty-first in Lahore; it is also very common in the central Punjab to perform it on the sixth, thirteenth, etc., day, *e.g.*, if the birth occurred on a Monday, it would be held on the following Sunday, and so on.

[4] In Delhi, and some other parts, this is the barber's perquisite.

[5] But in Delhi it is made over to the washerwoman, to be thrown into the river; in Hissâr it is carefully preserved; in Mâler Kotla it is kept wrapped up in bread; in Râwalpindî the hair is caught by the sister, or father's sister, of the child, lest it fall on the ground, and kept in the house with great care.

[6] In Kângṛa the goats must be young and free from blemish, and of a uniform colour; for a girl, the latter is the only essential condition.

[7] Or as carefully preserved; while the head and feet are given to the barber, and the skin to the waterman or the *mullah* (Hânsî). In Kângṛa, the bones are buried within the house. In Amritsar, a portion of the flesh is given to the midwife, and the rest distributed among the brotherhood; both bones and blood are buried. In Shâhpur the flesh is given to the poor, and the bones are buried in the graveyard, after being placed in an earthen jar. In Dera Ghâzî Khân, both bones and blood are carefully preserved (? buried) *at separate places.*

[8] If the flesh is thus distributed it would appear that the bones need not be kept intact (Ludhiâna).

[9] Only the grandparents, the great-grandparents apparently not being debarred.

Beṛî baṛhâna.—A blue cotton thread, called *beri*, is tied to the left foot of a child[1] in the name of Muin-ud-Dîn Chishtî of Ajmer, and when it is three or four years old it is taken to the shrine of that saint, and the parents there make an offering of five and a quarter *sers* of *maledâ*,[2] two pice and a trouser-string.

Bindû bândhna.—If a man's children die in infancy, he puts a bit of *bindû* or silver wire in the left ear of his next child.

Petâ chaṛhânâ.—Women desirous of offspring often vow to offer *petâ*[3] to the shrine of Dânâ Sher at Hissâr, if their wish is granted. A little of the *petâ* is given to the custodian of the shrine, and the rest is distributed among the brotherhood.

The chhaṭṭi, or sixth day.—The religious observance of the *aqîqa* is closely associated with the *chhaṭṭî*, the *chhûchak*, and the naming of the child, three observances which will now be described.

As among the Hindus, the *chhaṭṭî*, in spite of its name, is not necessarily held on the sixth day after the birth. Thus in Delhi the mother and child are bathed on the Monday or Wednesday nearest the sixth day, the former being an auspicious day because the Prophet was born on that day, the latter because: *Budh is liye ki sab kâm sudh hôṅ, i.e.*, "Wednesday, in order that all things may be right," and thus all subsequent children may be sons.

The mother sits on a stool while her husband's sisters pour milk, or water squeezed out of flour, over her head: green grass or a thin slice of betel-leaf are put into the water or milk. In return the sister-in-law receives presents (*nég*). Then the mother bathes, and, taking the child in her arms, puts on her nose-ring and sits on the bed. The guests, mostly women—though among the higher classes near male relatives are also invited—come in. Outside the men are entertained by eunuchs, *bhânds*, *shâh-ṭaiyam-ṭaiyi*, and dancing-girls: while inside the house Domnis and *chunewâlîân* give displays of dancing. The mother, with her head wrapped in gold lace, sits enthroned like a queen, the child's head being also enfolded in a kerchief. *Mubârak-badîân* or congratulatory songs are sung, such as:—

Jami jam shâdîâṅ, mubârak-badîân;
Bâwen farzand salâmat, salâmat-badîân.

"May you be ever blessed with such happiness; nay, may you, with your son, ever enjoy peace."

Or—

Navrang chure-wâlîān, meri jachâ ranîân:
Suhâ joṛâ pahin suhâgan motî bharî ranîân:
Navrang chure-wâlîân.

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[1] In Rohtak the thread is described as black, and as being tied on both feet. The child's hair is also allowed to grow until the period of the vow has expired, when it is cut at the shrine.

[2] *Maleda*, thick hand-made bread, broken up or pounded, and then mixed with sugar and *ghî*.

[3] *Petâ*, not traceable in the dictionaries; *peṭâ* is wealth, property or tripe.

"Our Zachâ queen, with bracelets of many colours and robe of red, a wife whose lord is alive, and the parting of whose hair is decked with pearls, yea, she is our bride."

In Hissâr the *chhaṭṭî* is observed on the sixth day, the mother and child being bathed, the brotherhood feasted and the mother dressed in new clothes. Her father also sends the *cheochak*, or gift of clothes, and the *aqîqa* is observed on this day. If a man does not observe the *chhaṭṭî* it is said:—*Chaṭṭî na chhilâ hogayâch.*

Like the Hindus, Muhammadans imagine that on this, the sixth night, the child is peculiarly subject to demoniacal influences.[1]

In Lahore the mother and child are bathed on the first Thursday or Sunday: this is called *chhaṭṭi kâ ghusal*, and food called *sudak kâ khânâ*[2] is sent to all the women of the family.

The chhûchhak.—The *chhûchhak* is very commonly observed on the *chhaṭṭî*, but it may be postponed to the fortieth day, and indeed there appears to be no absolutely fixed day for its observance. In the central Punjab the first confinement ordinarily takes place at the house of the mother's parents, and in this case the mother, if the child is a boy, brings back with her some gold and silver ornaments for herself and the boy on her return to her husband's house. These gifts are called *chhûchhak*. In the south-east the first confinement is arranged for at her husband's house, but the mother visits her father's house some four or six months later and then brings back the *chhûchhak*.[3]

Generally speaking, the *chhûchhak* appears to be used for any present sent to the mother or child on the *chhaṭṭî*, *aqîqa*, etc., by her parents or other relatives, or even by relatives of the child's father. In Rohtak, indeed, the term appears to be limited to the presents made by the sister of the child's father.

In Hissâr mention is made of a gift called *jamâwâna*, made by the mother's parents to her. It consists of gum, *ghî* and sugar, with clothes and ornaments for the child, and would appear to be distinct from the *chhûchhak*.

Weham.—Closely analogous to the *chhûchhak* is the *weham* observance, which is widely spread throughout the submontane and south-western districts.

In Lahore the *weham* is, among well-to-do people, a link in a chain of elaborate observances. On the *chhilâ*, or fortieth day, the women of the family assemble and make presents to the mother and child, who are then taken to a shrine. *Churî* is then distributed among the women, and the kinswomen of the mother's mother are also given food from her house. Her mother then sends her clothes and ornaments, for herself and the child. These gifts are called *weham.* The observance is only observed on the birth of a first-born child. Poor people also observe it, but on a smaller scale.[1] After it, the midwife is dismissed.

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[1] Among the *zamîndârs* of Bahâwalpur and Ahmadpur a ceremony called the *doyân* is observed on the sixth or eleventh day after birth; *chillre* or small loaves, also termed *wadiân*, are cooked, dipped in syrup, and distributed among the brotherhood.

[2] *Sudak*, a word not traceable in the dictionaries.

[3] Platts, *sub voce*, says *chhûchhak* is the ceremony observed after childbirth, when the mother visits her father—generally forty days after childbirth—and returns with presents: so the presents made on this occasion. The derivation of the word is obscure. In Hissâr it takes the form *cheochak*.

On the day after the mother goes to her parents' house and returns with her child and the *weham* presents, the women of the *mahalla* come to view them, and the child's grandmother distributes sweetmeats and *panjîri* to the brotherhood. In return the women each give the child a rupee, or less.

In Amritsar the term *waham* is applied to the presents made by the mother to each of the kinswomen assembled on the fortieth day.

In Bahâwalpur the parents give her on the eighth, twenty-first, or fortieth day, when she bathes, *pinnis,*[2] and a *trewar* for herself and her child: together with other clothes for it, according to its sex. If wealthy they also give a silver bracelet, or *haslî,* a silver necklet or a gold *mohar* for the child.[3]

On the seventh or eighth day, in Mâler Kotla, *halwá* called *Shaikhjî kâ halwá* is made and distributed among the relatives. Only persons belonging to the family of Shaikh Sadr Jahân can eat of this *halwá.*

The Treatment of the Mother.

In theory the mother is bathed on the tenth, twentieth, thirtieth and fortieth days, as in Rohtak, Hissâr, Karnâl, Ambâla[4] and Sirmûr; but to this rule there are numerous exceptions.[5]

The bath on the fortieth day is called *chhila* (lit., fortieth), and that on the tenth *daswân,* on the twentieth *biswan,* and on the thirtieth *tiswân.* But in the Karnâl district these three earlier baths are called *chhotá chhilá*; and in Delhi, the *daswán chhilá* (tenth), *biswán chhilá* (twentieth), *chhotá chhilá* (thirtieth), and *bará chhilá* (fortieth)—a curious instance of the confused use of precise terms in Indian observances.

Showing the stars to the mother.—On the night of the *chhaṭṭî,* mother and child are both dressed, their heads being enfolded in three-cornered embroidered bands (*qasába*), and the mother is seated on a low stool placed in the courtyard of the house. Two women, holding naked swords in their hands, bring her out; the midwife carrying a *chaumak*[1] to light the way. Standing on the stool with the child in her arms and the Qurân on her head, the mother looks towards the sky and counts seven stars, while her companions bring the points of the swords together over her head, forming a crescent so that *jinns* and *parīs* may not pass over her, and from this day the danger that they may overshadow her ceases.

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[1] In Kapûrthala the observances are simple. On the third day the father sends a *man* of *khichṛi* to his wife's father, and he, on the eighth day, sends in return *pinjri*, clothes and ornaments for the mother.

[2] *Pinnis* are rolls made of *ghî*, flour and *gur*, and weighing about half a *pâo* each.

[3] In Siâlkot the parents send their daughter *ghi* and sugar on the same days, with or without *pinnis*, to recruit her strength. They also send clothes for the midwife, as well as to the mother and child, and an ornament for the latter. Well-to-do people also permit the ornament to be given by the father's sister.

[4] As well as on the sixth (*chhaṭṭi*).

[5] *E.g.*, in Sirsa she is said to be bathed (? only) on the sixth and fortieth days. Or on the fifth, seventh, or tenth (Karnâl), every eighth day (Kapûrthala). In one account from Hissâr it is said that the *chhila* is only given on the fortieth day if it falls on a Friday. In Lahore the seventh, eleventh, twenty-first and thirty-first are said to be the days for the baths; or,

Meanwhile the father goes to the mother's bed, and standing thereon, repeats the *bismillâh* in full. He then shoots an arrow into the ceiling, at the *mirg.* Hence this observance is called the *mirg mârnâ,* and the wife's mother gives her son-in-law a *neg* on the occasion.

Once, on the birth of a prince in the family of Bahâdur Shâh, King of Delhi, the poet Shâh Nasir of Delhi, described this custom thus:—

Wuhīṇ phir shāh ne yih rasm kī wa'ṇ ;
Chhaparkhaṭ par qadam rakh, ho-ke shādāṇ,
Adā kar haṛf i "Bismillāh" sārā,
Kamān o tīr le-kar mirg mârā ;
Namūdār is tar'h thā saqf meṇ ṭīr,
Falak par kahkashāṇ kī jaise tahrīr.

"Forthwith (while his consort was viewing the stars) the king observed the rite, standing on his wife's bed with a bow and arrow in his hand, and after repeating all the *bismillâh,* his arrow shot by him into the roof looked like the Milky Way in the firmament."

After seeing the stars the mother returns and seats herself on her bed; a table-cloth is spread in front, the stool being used for a table, and on this is placed food, including seven kinds of vegetable and various dishes. The *zachâ rânî* or "queen mother," together with seven other women, whose husbands are living, takes a little from each dish, and the only words heard are "*mubârak !*" "*salâmat.*" Songs are also sung:—

Jachā jab dekhne ko āī tāre,
Sitāre chārḳh i gardūṇ ne utāre :
Huā farzand yih sab ko mubārak :
Kaho, larke kā bāwā, mirg māre :
Chhaṭṭī kī dhūm jo pahuṇchī falak tak,
Qamar aur mushtarī donoṇ pukāre,
Khudā ne kyā ḳhushī donoṇ ko dī hai ;
Damāme baj gae—gūṇje naqāre.

"When the mother came out to see the stars, the revolving heavens were pleased, and showered stars upon her head (showered stars over her, like the

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according to another account, on the first Friday (*chhaṭṭi ka ghusal*), and on the tenth (on both these days the midwife gets dues), on the twenty-first (when *panjīri* is distributed and a feast held in memory of the ancestors), and on the thirtieth and fortieth days. In Siâlkot the mother is bathed on the fifth, if the child be a girl, and on the eighth if it is a boy.

[1] Tr.: *chaumakh, i.e.,* "with four mouths." It is made of dough, in the shape of a four-cornered cup, to hold four wicks, and is fed with *ghî.*

money thrown at weddings, etc., upon the the chief character in the ceremony). As the child that was born will be a blessing to all, tell his father to perform the *mirg mârnâ*, whereby his courage may be proved. When the sounds of rejoicing at the *chhaṭṭî* reached the skies, the Moon and Jupiter cried: 'What joy hath God bestowed on both (the parents), that the drums have thundered forth their happiness.'"

Some rupees are now thrown into the *chaumak* as a present to the midwife.

This observance is very widespread, but there are several interesting local variations. Thus, in Ludhiâna the Jaṭs, Gûjars, Arains, Ḍogars, etc., observe this rite on the third day, and the mother goes to the door of the house accompanied by a boy who has a *phâlâ* (ploughshare) over his shoulder and a *paraiṇ* or oxgoad in his hand. In Mâler Kotla the rite is called *chhaṭṭî ke târe dikhânâ*, "to show the stars of the sixth." The mother comes out attended by the midwife and a woman carrying a lamp. A man of the family carries the Qurân, out of which he reads certain passages to the child. In her mouth the mother has some uncooked rice, and in her hand an iron weapon or implement, while in her lap is some uncooked *khichṛî*. Thrice she spits rice out of her mouth to the right and thrice to the left. The reader of the Qurân gets a silver coin and some *guṛ*, and the midwife takes the *khichṛî*. On this day, the sixth, the mother is bidden to eat her fill, otherwise the child will have an insatiable appetite all its life.

In Kângṛa the mother sees the stars on the seventh day, unless it fall on a Friday.[1] She bathes and observes the chief points described above in this ceremony, but the sword is held over her head by her husband, and a woman reads the Qurân. In Gujrât the Chibh Râjputs have an observance of their own. On the third, fifth, or seventh day the mother leaves her room. A square is made with whitewash or rice-flour in a wall, and red lines drawn across it diagonally. At their intersection a picture of the new moon is made, and a sieve placed over it, at which one of the child's near kinsmen shoots seven arrows.

In the imperial family another custom called *Bi-gīr-bachchā*, also prevailed, and the other Mughals of Delhi also observe it with slight variations. A big, sweet loaf was made of 5¼ *sers* of flour, baked in the ground, and the middle portion taken out, leaving only the rim; on top of this naked swords were placed, and on the right and left arrows stuck into it; seven *suhāgans*, three in front of the loaf and four to the left of it, stood in line; one woman passed the child through the hole, saying, *bi-gīr bachchā*, "take the child"; the next one would say, *Allāh nīgahbān, bachchā*, "God is the protector of the child": and, passing the child between her legs, would say to the third *bi-gīr bachchā*. In this way, each of the seven *suhāgans* passed the child seven times through the loaf, and between her legs. This is the only Mughal custom foreign to India, all the others being similar to those prevailing in it.[2]

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[1] Because if she bathe on a Friday she will be barren for twelve years! Tuesday and Sunday are the lucky days for the bathing.

[2] One who saw this observance gone through for a great-grandson of Shâh Ālam says the rim of the loaf was suspended on a sword and arrow on either side: seven women stood in a row, opposite the rim of the loaf; and an eighth stood on the other side, holding the child. The

Muranḍoṇ kî rasm.—When the child is about five or six months old its mother's mother sends some *muranḍe*,[1] and these are distributed in the family. The *muranḍe* are balls made of wheat or parched rice mixed with sweets, or else of *motî chûr ke laḍḍû mûng kî dâl* mixed with syrup, together with poppy seed or boiled wheat. The balls are made by closing the fist (*muṭṭhî ke band karne se*), and are sent because at this age the child begins to open and close its fists.

Sardān karne kî rasm.—Just after the *târe dikhânâ* the families of the old Mughal dynasty performed another called the *sardān*[2] *karne ki rasm* ; which is also observed by people of the city of Delhi, but not necessarily on that date; as any time before the child teethes will do. Women believe that if a child which has not teethed be lifted above the head, it will pass white motions, for which this observance is a preventative, or, if the disease has begun, a cure. It is performed thus :—The ropes used to tighten a native bed are loosened, and two women, who must be mother and daughter, are called in ; one of them gets on the bed, with the child in her arms, while the other sits on the ground towards the foot of the bed. The former then passes the child through the opening in the loosened ropes down to the latter, and she passes it back again to the former. This is done seven times. The two women receive the same gifts as are given in the *bi-gîr bachchā* ceremony. In Delhi city this observance is called *shirdan*, and is only practised if the child

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latter passed the child through the loaf to the first of the seven, and she passed it on to the next between her legs. The child was thus passed on to the seventh woman and back again to the place where it started, seven times. This custom was kept up till the time of Akbar II. And it is still observed, with the following modifications, by the *shahzādās* (princes) of Delhi, thus : seven women of whom the mother is one (though, on account of her impurity, she has a substitute to repeat the *sūrā-e-iḳhlās*), sit round the bed ; the first of them makes the child over to the next, who takes it, and in her turn makes it over to the third, and so on, right round to the seventh woman ; each while passing the child on to the next repeats the *Qul-ho-Allāh* seven times, and then says, "*Bi-gīr bachchā*," and while receiving it says, "*Allāh nigahbān, bachchā.*" When the child has reached the seventh *suhāgan*, each one is given two *nāns* (loaves), or *bāqarḳhāni*, two *laḍḍūs*, two almonds and two dry dates. This custom was introduced by the Mughal dynasty from Turkistan. It appears to owe its origin to the idea that the child, as being evil, should not be taken down from the bed for forty days, but that, as it is taken down, it must be placed under Divine protection.

Other Mughals of Delhi keep the custom thus :—No loaf is made, but at midnight a sheet is spread on the ground and upon this seven *suhâgans* sit, each with a heap of *khîl* (parched rice) and *batâshas*, and two betel leaves on top of each heap. The child is first placed in the arms of one of the women who repeats her *Alhamd* (a *sûra* of the Qurân also called the *Sûra-i-fâtihâ* or *Sûra-i-ikhlās*) thrice : she then blows on the child and passes a pair of scissors before its face ; passing it on to the next woman she says, "*Bi-gir bachchā*" and the latter replies :—"*Bi-yâr bachchā, Allâh nigahdâr bachchā*," *i.e.*, "Make over the child to me, the Lord keep the child." The child is then passed from one woman to the other. Having done this they all sit down and partake of food, and sing and play music the whole night—till early in the morning when all the guests leave for their homes. After this the *Chhilâ* ceremony is performed.

[1] *Maruṇḍa* or *muruṇḍa*, a ball of parched sugar mixed with crude sugar, sometimes of a arge size : *Panjabi Dictionary*, pp. 731, 777, 779.

[2] *Sardân*, possibly a contraction of *sar-gardan*, *i.e.*, that which is passed over the head, *Shirdan*, clearly from *shir*, milk.

actually gets ill. The women add the question, *Shirdán gayá?* They reply *Gayá* each time they pass the child through the ropes.

Menials' offerings.—Offerings made by menials to the child play an important part in the observances in Râwalpindî and Gûjrât. In the former district a boy is presented with a *totá*[1] by the tailor; with a chaplet of *dharek* and siris leaves by the flower woman[2]—this is hung on the outer door as a safeguard against the influence of women who have miscarried; the washerman daubs the wall near the outer door with stuff from his washtub, as a charm against the evil eye; the *máchhî* makes a net and casts it over the child, as an augury that he may remain dutiful and obedient to parental control; the sweeper (*musallî*) brings a small bow and arrow, placing them near the boy's head, so that he may be manly; the shoemaker presents a deerskin; and the *kamaggar* or painter brings a paper horse. Each of these dependants receives his customary dues in return.

In the villages of Gûjrât the family Brahman of a Muhammadan family makes an imitation *pîpal* tree, before the fortieth day, and receives from rupees one to five, according to the family's position.

Dhamâṇ.—The *dhamâṇ* rite is observed among Muhammadans in Siâlkot and Gûjrât. In the latter district the mother bathes on the fifth or seventh day and puts on new clothes. Bread with *halwá* is distributed among the brotherhood. This is called *dhamâṇ karná.*[3] In Siâlkot the observance merely consists in the kinswomen assembling a few days after the birth, and in distributing *halwá* and *chupattis* among the brotherhood.

Pichhâwân.—The belief in the evil effects of the shadow (*pichhâwân*) of a woman whose child has died young survives among the Muhammadans of Gûjrât. Every precaution is taken to prevent her getting access to mother or child, and green *sarînk* leaves are hung over the outer door to avert the *pichhâwân.* Certain tanks are believed to have the power of curing children who are affected by *pichhâwân*, and so waste away if bathed therein.

Kunisht.[4]—A curious custom, not very clearly described, is observed in Siâlkot by certain tribes. During the first year, if the child be a boy, the wives of the family prostrate themselves before a heap of sugar, which is spread out on a blanket and divided into as many shares as there are proprietors in the village, invoking the elders' good-will. The daughters of the tribe are strictly forbidden to use this sugar, when it has been distributed among the brotherhood, presumably because they will, on marriage, cease to be members of the tribe or of the village community.

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[1] A toy made of several pieces of cloth, of all colours, strung on a thread like the tail of a kite. This is hung on to the roof of the house, but without any express meaning. This is also done in Gûjrât.

[2] This in done in Gûjrât by the *Arain* or flower-woman, and she receives a rupee.

[3] Among the Gûjars the Brahman actually comes in on this day and makes a *chauka*, in which a lamp of flour is lit. Huge loaves of bread, each weighing a *topá*, are given to the menials, and the Brahman himself gets a *topá* of flour. In well-to-do families a special kind of *halwá* is made and eaten by the members of the *got*, but no one else may partake of it. Even married daughters cannot eat this *halwá*, because in marriage they cease to be members of their paternal *got.* On the other hand, a share is sent to a son's wife if she is absent.

[4] *Kanisht* means, apparently, "hell," "younger," "of the lowest degree," in Panjabi.

Fosterage.—In well-to-do families a wet nurse (*annā*) is chosen from some decent family, with a nurse (*mānī*) to dress the children; a *dadā* to bring them up, and a girl (*chhochho*) to wash soiled clothes, and to play with the children, under the mother's supervision.

In the morning the *chhochho* plays with the children, humming the following verses:—

For Boys:—

1. *Mīāṇ āwe dūroṇ se,*
Ghoṛā bāṇdhūṇ ḳhajūroṇ se.
"My master has come from a far country;
I will tie his horse to a tall palm tree."

2. *Mīāṇ āwe dauṛ ke,*
Dushman kī chhātī toṛ ke.
"My master comes dashing in, the foe's breast after smashing in;"

Or—

"Master comes with a rush; Giving the foe's breast a crush."

3. *Jug, jug, jug, jug,*[1] *jīā karo,*
Dūdh, maledā,[2] *piyā karo.*
"Long, long, may you live on;
Milk, crushed bread with butter, live on."

When the *dādā* washes the child's face she sings:—

Chhīchī, chhīchī, kauwā khāe;
Dūddā, bhātī, nannā khāe.
"The dirt, the dirt, the crows may eat;
Milkie, ricie, tiny will eat."

At noon, the *annā* sings the following lullaby (*lori*):—

Á jā, rī! nindiyā tū ā kyuṇ na jā?
Mere bāle kī āṇkoṇ meṇ, ghul mil jā.
Átī hūṇ, bīwī, ātī hūṇ:
Do, chār, bāle khilāti hūṇ.
"Come, Lady Sleep! why don't you come?
To the eyes of my baby, O come!
I am coming, Lady, coming!
Playing with a few children—I am coming!"

Or

Tū so, mere bāle! tū so mere bhole! jab tak bālī hai nīṇd:
Phir jo paregā tū dunyā ke dhande, kaisā hai jhūlā! kaisī hai niṇd!

Chorus.—Tū so, mere, etc., etc.

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[1] Hindi for an age, epoch, period, long time, always.

[2] See note on p. 244 ante.

Khel, tamāshe, kar le tū sāre ; kahtī hūṇ tujh se, āṇkhoṇ ke tare !
Zindā haī māṇ bhī, bāp bhī bāṛe: kar le tū ārām Sayyid piyāre :
Chorus.—Tū so, mere, etc, etc.
Khel tum aise khelṇā, lalnā ! jin se na ho māṇ, bāp kā jalnā :
Dunyā se ḍar, ḍar, saṇbhal-kar chalnā ; sakṛi hai ghāti, rāsta, phisalnā.
Chorus.—Tu so, mere, etc., etc.

" Sleep, my babe ! my innocent babe ! while to the child there's sleep,
Caught up in the whirl of (life's) business ; where is thy cradle, where thy sleep !
Chorus.—Sleep, my babe ! etc., etc.
All fun and frolic, go enjoy : I am telling you, my dearest boy !
Your parents are living yet ; Sayyid, dear, take the rest you can get.
Chorus.—Sleep, my babe ! etc.
Play such games, my dear boy, as your parents won't annoy :
Walk the world in fear, in careful mode ; narrow its vale, slippery its road.
Chorus.—Sleep, my babe ! etc.

At night, on seeing the moon, he is thus amused :—

Chandā māmūṇ, dūr ke.
Baṛe pakāweṇ, būr ke ;
Ap khāweṇ thālī meṇ,
Ham ko deweṇ piyālī meṇ :
Pīyāli gaī ṭūṭ,
Chandā māmūṇ gae rūṭh,
Piyālī āī aur,
Chandā māmūṇ, āe dauṛ.

" Uncle moon afar, fries fritters of saw-dust ; he himself eats off plates and gives me (food) in small cups : the cup broke, and uncle moon was angry : another cup came, uncle moon came running."

Sometimes the nurse sits near the lamp, and, reaching out her hand to the flame and passing it close to her face and eyes, repeats :—

Akkho ! makkho !	" Akkho ! makko !
Mere miyāṇ ko, Allāh ! rakkho.	God ! preserve my master."

When the child is just able to articulate, she sits him on her knees, and swings him, resting on her back, and moving her knees up and down, while she sings :—

Jhujjhū jhoṭe, jhujjhū-jhū :
Jhujjhū kī ḍālī jhūm paṛî ;
Mîyaṇ ne chun, chun, god bharī.
Pakke, pakke, miyāṇ khāēṇ ;
Kachche, kachche naukar khāeṇ.

Jhujjhu = jujube or *ber* tree. The purport is that her little master is supposed to be on a swing, hung on a tree, which are her legs, and that as the branches swing, the fruit drops down, the child fills his lap, eating the ripe ones himself, and the servants the unripe ones. Afterwards she puts up her legs as high as they will go, and says :—

Khabardār rahīyo, buṛhīyā ! rājā kā koṭ girtā hai : Aṛā ! ṛa ! ṛa ! dham !

Look out, old woman ! the king's fort is tumbling down : crash ! crash ! down ! thud !

If it is a girl, she amuses her thus :—

1. *Bīwī rī ! tū bāī, change din āī :*
Jīweṇ tere bāp aur bhāī !

"Miss, you are a princess ; you have come at a nice time : may your father and brother live long."

2. *Bīwī, beṭīyāṇ, chhaparkhaṭ meṇ laṭīyāṇ :*
Māre magrūrī ke, jawāb na detiyāṇ !
Miss daughter, you lie in a mosquito curtain :
Through pride, you don't answer me !"

3. *Akkho ! makkho ! merī bīwī ko, Allâh ! rakkho.*
"Akkho ! makkho ! O, God ! preserve my lady !"

If, while asleep, the child smiles, they say that *Bihāī* is making it laugh. *Bihāī*, or *Beh Mātā*, is a Hindu goddess, who, it is believed, makes the child smile at times, and at others weep, by whispering in its ear that its mother is alive or dead.

Rât-jagā, or vigil.—The name *rât-jaga*, or vigil, is applied to any merrymaking which is kept up all night by the women. A vigil is kept on the occasion of a *chhaṭṭî, dûdh-chuṭâî, sâl-girâh, bismillâh*, or wedding. The frying-pan is kept on the fire all night, and fritters are made, *Allâh mîyâṇ kâ rahm*[1] being also baked. This is done to ensure divine favour. At the same time, the *bîbî kî niâz*, or offering to Fâtima, daughter of Muhammad, is also made. Seven kinds of fruit and vegetables, in plain or sweetened[2] rice, are served in new earthen vessels. On this offering are also placed some *missî, phulel* (scented oil), *surmâ* (antimony), henna, *kalâwa* (coloured thread), sandal-wood and five annas as *chirâghî* or lamp fee. Formerly it was also customary to put some slaked lime in a small plate, into which the *pāk-dâmaneṅ* or chaste wives, who partook of the food offered in the *niâz*, dipped their fingers, and licked off the lime which adhered to them, in the belief that blood would thereby be caused to flow from the mouth of those who were unfaithful.

Teething customs.—As soon as the child begins to cut its teeth,[3] the father's sisters chew coconut and blow it into its mouth, receiving *neg* in return. This is supposed to help the teeth to come out. The milk teeth, when they drop out, are thrown into the holes of mice, so that the child's teeth may be small and pretty like those of a mouse.

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[1] A kind of biscuit, flat and round, made of a kind of *halwâ* prepared from rice and flour, kneaded in *ghî* and sugar, and in which are mixed dried fruits.

[2] The proportions being 5¼ *sers* of rice to 2½ *sers* of sugar and 2½ of curd.

[3] The first appearance of teeth is called *bachche nikalnâ, i.e.*, "the coming out of the young ones."

Birthday or sâl-girāh.—On a child's first birthday, *bâlâshâhî* or other sweets are sent for, and a coloured thread (*kalâwâ*), a silver ring, green grass, crystalised sugar and betel (*pân kâ bîṛâ*) are arranged on a tray and placed before the oldest man in the family. He then takes up the thread and ties a knot while repeating the *bismillâh,* making a second knot in which betel is placed, a third with grass, a fourth with sugar, and a fifth, after touching the child's head, with the thread. Then all present wish the child long life, saying :—" May God grant you this year and a thousand more." Wealthy people also give dances, etc.

Weaning.—A child is weaned[1] between the ages of two and two and a quarter. Both the father's and mother's kin assemble, and *khajūrs*[2] are set in a small plate before the child. If it takes one it is an omen that it will be weaned in one day; if two, in two days, and so on. The *annâ-taggâ* or wet-nurse's husband is given costly clothes, and a fee in money; and other servants also get presents. Barberry or aloes is applied to the mother's or nurse's breasts, and the child is told that "something deadly has bitten it" (*jî jî ko bû ne kâṭ khâyâ hai*).

Khir chatai.—In Kângṛa, as soon as a child is able to eat, the kinswomen assemble and seven *suhâgans* in turn put a little *khîr,* or rice boiled in milk, into the child's mouth, eating what is left themselves. If the child is a girl, her nose is bored, with a similar observance.

Circumcision.—Around so primitive a rite as circumcision, cluster, as might be anticipated, countless local and tribal usages, accretions on the orthodox observance. This is simple. Though not even alluded to in the Qurân, the rite is held to be *sunnat, i.e.,* founded on the customs of the Prophet,[3] but no religious observances appear to be prescribed in connection with it.

Circumcision should be performed between the ages of seven and twelve, but it is permissible on or after the seventh day after birth. It is very commonly done in the *chhaṭṭî.*

As a rule the operation is effected at home, but in many places the boy is taken to the mosque, and it is done in front of the door.

The keynote to the observances connected with the operation lie in the fact that it is regarded as a wedding—indeed, in the south-west of Bahâwalpur it is actually termed *shâdî.* In accordance with this idea the boy is treated like a bridegroom, dressed in yellow clothes, and mounted on a horse. Before the operation the brotherhood is sometimes notified, sugar or dates being sent out to its members.

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[1] The term for weaning is an euphemism : *dûdh baṛhânâ* literally, to "increase the milk," the idea being that ill-names should be avoided.

[2] *Khajûrs* are made of *sûjî* and sugar, kneaded with *ghî* and water, rolled into small sticks and fried in *ghî.*

[3] See article in Hughes' *Dictionary of Islam.* In the Punjab the rite is commonly called *khatnâ*, cf. A. *khatnah* or *khitân* ; but the term *tahor*, i.q. *tahûr* (purification), is also used.

On the day itself the brotherhood is feasted, and entertained with dances. The women sing songs, and sometimes *ḍomnîs* are employed to keep the singing up all night.

It is not unusual to half intoxicate the boy with *ma'jûn*, so that he may not feel the pain.

As a rule the barber operates, but in Kângra the Abdâl is sometimes employed and in the west of the Punjab the Pirhain. In Bahâwalpur the boy is told by the guests to slap the Pirhain, who gets as many rupees as he receives slaps. Naturally as the father has to pay, he urges the boy not to slap the operator.

In Kângra the boy is seated on a basket, in which is placed a cock, the barber's perquisite. In Lahore he is seated on a stool, to which his hand is tied by a piece of *mauli* thread, and unless a companion in suffering has been found for him, the top of an earthen vessel is simultaneously cut off.

The barber receives a substantial reward. He puts his *kaṭori*, or cup, on a stool in the midst of his assembled guests, and each of them puts a coin into it.

In Mâler Kotla the boy is ceremoniously bathed on a wooden stool, and then his mother's brother ties a *kangnâ* of thread, called *khamâni*, on which are strung a betel nut, an iron ring and a piece of liquorice. After the operation the barber bids the uncle take the boy away, and he does so, carrying him in his arms.

In Bahâwalpur the boy's mother stands by with a Qurân on her head during the operation, her women friends standing round her while she dips the hem of her petticoat in a vessel full of water.

The foreskin, when removed, is generally buried, but sometimes it is thrown on the roof, or even attached to it with a piece of straw, in Hissâr. In Bahâwalpur it is called *khol*, and is carefully preserved, being sometimes buried in the floor, which, being near the water pitchers, always remains wet. In Delhi it is tied, together with a peacock's feather, to the boy's left foot, so that no one's shadow may affect him; but this custom is falling into disuse.

In Râwalpindî the operation is often carried out on the same day as the *aqîqa*. The child's sisters and his father's sisters are presented with clothes, and they sing:—

Hariâ nî maye Hâriâ,
Hariâ te bhâgi bhâria,
Jis ghar eh beṭrâ jamiâ,
Ohio ghar bhâgîbhariâ
Hariâ nî maye Hâriâ,
Haria te bhâgî bhariâ.

"Oh, mother! How blessed and peaceful is that house in which such a son has been born! Mark well that daughters alone have been useful on this occasion."

The ride on a mare.—If the boy is well a month or more after the circumcision, a day is fixed for the *ghorî chaṛhânâ*, or "mounting the mare." All the kin assemble, and the boy, dressed in new clothes, given by the mother's mother, is decked like a bridegroom with a *sihrâ* or chaplet of flowers, a *baddhî* round his neck, and a tassel or nosegay hung from the right side of his turban, (*turrâ*), etc., that is to say, a complete set of flower ornaments. The barber receives the boy's old clothes, his fee (Rs. 5 to 25 or more) and a new suit of clothes. Then the boy is mounted on a horse, and, preceded by a *roshan chaukî*, is taken to some shrine, where he offers *malîda*.[1] On returning home the guests are feasted, and the women sing the *suhâg ghoriân* precisely as at a wedding. The observance corresponds to the investiture with the *janeo* among Hindus.

Piercing a girl's nose and ears.—A girl's ears and nose are generally pierced at five or six years of age, before they are too hard. The left side of the nose is first pierced, then the ears, with three holes in the lower and four in the upper part; but the prevailing fashion now is five. Coconut and *misrî* are distributed in the families of both parents, and the operator[2] who does the piercing (*kān-biṇdhâ*) receives flour, molasses and one and a half annas or rupees. Turmeric is applied to stop the bleeding, but the women also believe that the operator repeats charms to render the puncture painless.

Bismillâh ki rasm.—When a child is four and a half years old[3] he or she is prepared for going to school by the *bismillâh* rite. All the wedding rites are gone through, henna being applied to the child's hands and feet on the preceding night, and during the day she or he is bathed and decked as a bride or bridegroom. Seven kinds of balls, made of parched rice, are distributed among the guests, and on a sheet of red paper on a silver slate, ornamented with gold dots, etc., is written, *bismillâh* and *iqra biism-i-Rabbî kallazî khalaq.*[4]

The child is first made to say *bismillâh* and then this verse after his teacher. Cries of "*mubârak*," "*salâmat*" are raised and the sweets served out. A feast follows, and servants and menials also get presents.

Vows.

A vow (*H. mannat*, in Panjabi *manaut*) is not infrequently made by a barren woman that she will offer a cloth, light a lamp, and have her child's first tonsure performed at a specified shrine if offspring be vouchsafed to her. The period for such an observance is always specified in the vow, but it is usually limited to a time before the child attains the age of twelve years.

Badhâwa.—Another type of vow is to place a silver necklet round the child's neck every year, or to make him wear a *hama'il*, and add one rupee or more to it every year until he attains the age of seven, ten or twelve, when the accumulated silver is sold and the proceeds given to the poor.[5] If the necklet is sold at the age of ten the observance is called *dasaundh.*[1] The necklet should be put on the child's neck on the last Wednesday in Safar, the second month of the Muhammadan year. In Amritsar this is called Badhâwa Pîr Sâhib.

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[1] = *Maleda*, see note on p. 244 *supra*.

[2] The piercing is done by the poorer class of Hindu tradesmen who deal in cheap ornaments.

[3] Four years, four months, and four days in Karnâl.

[4] The first *sûra* revealed to Muhammad.

[5] But in Siâlkot and Bahâwalpur the *haslî* or *hamâil* becomes the property of the boy's wife when he marries. In Hissâr the sale-proceeds are sometimes spent in sweets, which are distributed among the brotherhood. In Kapûrthala the necklets are sometimes sent to the shrine to which the vow was made, and sometimes they are divided among the near kinsmen of the child's mother.

In Siâlkot the term *badhâwa*[2] is applied to the custom of putting on the *hamâ'il* and adding a rupee year by year. After the twelfth year it belongs to his wife, but, the vow may stipulate that a certain share of the value shall go to a certain shrine, and the number of years may vary. In Ludhiâna the sale-proceeds are often supplemented by further gifts, and go to feed the poor. The object is to invoke God's favour on the child.

Half-heads.—In Ludhiâna (in fulfilment of vows), some people shave only half the child's head at a time, every week. The right half is first shaved, from back to front; then the left. This is done for some years, and then a *niâz* is offered, and the whole head shaved.[3]

Imâmôn-kâ-paik.—During the first ten days of the Muharram, some people get their children made messengers of the Imâms (*imâmôn-kâ-paik*), thus: ten yards of muslin are cut into four equal parts, lengthways, and two are dyed green and two black. One of each colour is then taken and made into a sheet, giving two sheets, of which one is wrapped round the head and the other round the waist. Some ten or fifteen small bells are then strung on a cotton thread, which is also tied round the waist. The boy goes barefoot, but his *pagrî* is adorned with feathers.[4] On the tenth day of Hasan's martyrdom, rice and milk are cooked and distributed among Muhammadan households.

Jhaṇḍ.—In contrast to the religious rite of *aqîqa* is that called the *jhaṇḍ*, which is done either in accordance with an express vow, or which may be regarded as the fulfilment of a tacit vow. In Hissâr the rite is said to be extinct, but other accounts appear to contradict this.[5]

The *jhaṇḍ* is commonly observed within the *chhilâ*, or forty days from the birth, but it may be deferred till a much later age. In Kapûrthalâ the *aqîqa* is called *jhaṇḍ utârnâ*, but in Mâler Kotla, if the *aqîqa* is not performed, the *jhaṇḍ*, *i.e.*, a lock of hair is left on the head and cut off generally at the shrine of Shaikh Sadr Jahân, a vow being made that it will be done if the child live a certain time, generally twelve years.

The *jhaṇḍ* rite is not confined to boys, but is observed in the case of girls also

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[1] *Dasaundh*, lit., a tithe, also a votive offering made at the age of ten: see *Panjabi Dictionary sub voce daswandh.* Sometimes a rupee is simply put by each year till the child is ten.

[2] *Badhâwa*=lit., increase, growing. But in Maya Singh's *Panjabi Dictionary* it is said to mean the ornament put on a child's neck in fulfilment of a vow.

[3] In Siâlkot this custom is modified: only children whose brothers and sisters have died, or whose parents are old, are treated thus—half the head being shaved, and the other half left, in order that the Angel of Death may pass them by as too ugly. This is equivalent to giving an opprobrious name to the child. On *Indian Half-Heads*, see a note by the present writer in the *Indian Antiquary* for 1906. (Vol. xxxv, p. 213.)

[4] If the boy be a Shia his remaining garments will be black; if a Sunnî, green.

[5] Vows appear to be made at the shrine of Dânâ Sher of Bhauna to cut the *jhaṇḍ* there at a specified age, but this seems to be regarded as part of the *aqîqa*.

—the only difference being that the barber's fee is diminished by half in the latter case.

In Kângra the hair is mixed with flour, baked into a loaf, and thrown over running water; but as a rule the hair is weighed and its weight in silver given to the barber. In Lahore, however, great importance is attached to the *jhanḍ* or first hair. It is generally removed on the fortieth day after the *chhila* observance, but some people do this on the *aqîqa* day. In either case the hair is scrupulously preserved, and sometimes placed in a silver amulet or always carried about with one. The hair is deemed sacred, and kept by one on commencing any new work. Women believe that if one has it by one no evil influence can prevail over one. But some people tie the hair to the child's bed. The barber is paid from rupees one to five, and other menials get dues from the mother's mother. *Jhanḍ*, too, is very often performed on the seventh, fourteenth, twenty-first or fortieth day, and silver equal to the weight of the hair is given away in charity, the hair being then buried in the ground. But if a vow has been made the rite is carried out in fulfilment of that vow, and the *jhanḍ*, or a lock of the hair, removed to the specified shrine. There, too, a he-goat is sacrificed, and some people even sacrifice a he-goat every year until the child attains the age of twelve or twenty-one. Besides which bracelets are put on the child until he is twelve.

Among the Chibh Râjputs of Gujrât the first tonsure must be performed within seven years at the shrine of the martyr Shâdi, ancestor of the tribe, and until it is done the mother must abstain from meat. If the hair is cut a lock must be left. This lock is called Bâbû Shahid. At the shrine a goat is sacrificed, the mother eats the liver, and the rest is given away as alms.

In Shâhpur the *jhanḍ* is observed on the seventh, eighth or ninth day, a *chûrî* of bread, *ghî* and *gur* being distributed among relatives or friends. Sometimes a lock of hair called *lit* is kept and removed some years later at a Pîr's shrine; but the observance is not common.

In Râwalpindî the *jhanḍ* is removed between the seventh and twelfth days; the sister or father's sister holds the child in her lap and catches the hair. The Ghebas keep three locks or tufts of hair—called *suchî bodî*—which remain until the child is circumcised.

In Râwalpindî, when a child has been shaved on the seventh day, a lock of hair is left, to be removed at the shrine of a saint at the time fixed in the vow. Other people, in accordance with a vow, place a *hanslî* on the child's neck and sell it at the end of the seventh year, offering the money to the shrine. Other but similar vows are made, and in fulfilling them the parents put on new clothes, fast, and feed the poor with the food specified in their vows.

The hadia.—After the *bismillâh* the child begins to learn the Qurân, and the observance held on the day on which he completes his study of it is known as the *hadia*, which, strictly speaking, is the present then made by his parents to his teacher as a reward for his services. The child is dressed and adorned with flowers, with a chaplet on his head, and a *turrá* or necklet of pearls or flowers, just as if he were a bridegroom. His teacher, with all his other pupils, goes to the boy's house, where sweets are set out on trays, with the present (of clothes and money) for the teacher. The boy first goes through the regular *namáz* or form of prayer; then he puts out his hands with the palms upwards, and on them is placed a piece of red paper tied with *kalâwa*, to indicate his gratitude towards his teacher. He then stands up as a mark of respect to him, with his hands stretched out and tied together, to signify that he cannot escape from the bonds of his obligation to his teacher, who absolves him by loosening the *kalâwa*. The teacher and his pupils next recite the *ámîn* which runs :—

A'ūzo billāhe mīnush shaītānī *Ámīṇ !*
Bismillahhīr Rahmānī ,,
Farzand-i-nek zādī ; nāmash nīko nihādī :— ,,
In dam bi kun to shādī ; subhāna, man yarānī :— ,,
Khatm i Qurāṇ numūdā ; 'ilm i zabāṇ rabūdā ,,
Fārhat ba jān fuzūdā ; subhāna, man yarānī ,,
Ai mādar i ḳhujistā, bi kushāe qufl i bastā ,,
Tashrīf deh, do dastā, subhāna, man yarānī ,,
Kuchh khāṇḍ, kuchh chhuhāre, āge rakho hamāre ; ,,
Shāgird khāweṇ sāre, subhāna, man yarānī : ,,
Ámīṇ tamām kardām ; in' am i ḳhwajā burdam, ,,
Halwā o shahd ḳhurdam, subhāna, man yarānī ,,

Trans.—"I crave the help of God to protect me from Satan: I begin this in the name of God, who is most merciful and gracious. You have given birth to a good child and given him a good name: at this time, be joyous: God is holy, and we cannot see Him; he has finished the Qurân, and has acquired knowledge of languages, has increased the joy of the heart: God is holy, and we cannot see Him. O fortunate mother of this child, open the lock of the treasury: give presents with both thy hands; God is holy, and invisible; place sugar and dry dates before us, so that all my students may eat, and enjoy themselves: God is holy, and invisible. I have finished the *Ámīn* and received my present from you. I have eaten *halwā*, as also honey."[1]

The teacher then prays for the child and all his family, and is given a shawl, some clothes, money and sweets. Lastly, he unties the boy's hands, and his relatives give the latter presents of money. The boy is then taken to the mosque, where he offers some money, and on his return home the guests are feasted.

Roza, or fast.—On attaining the age of seven, nine or eleven, a boy must keep the Muhammadan fast, and this occasion also is observed as a wedding in miniature. His fast is broken on various dainties, and guests invited to break theirs in his company. Dependants, too, get presents. The child only fasts at first for one day or more, according to his powers of endurance.

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[1] The verses signify that although the Lord Himself neither eats nor drinks, still He is pleased to grant His people dainty food and fine clothes, by means of the Qurân.

Mûchhoṅ kâ kûṅḍâ.—At the age of seventeen or eighteen, when the youth's beard has begun to grow, the observance called *mûchhoṅ ke kuṇḍe* is kept, and a thank-offering (*nîâz*) made to the Prophet. This consists of vermicelli[1] (which is kept in the large earthen pots called *kuṅḍe*) and is eaten by both men and women, in contrast to the *bîbî kî niâz*, of which only chaste women may partake. Powdered sandal is also applied to the youthful down with a rupee, not with the fingers.

NOTE.

I am indebted for much of the foregoing article, especially for the various rhymes and their translations, to Sayyid Ahmad, Dahlavi, who has also looked through the proofs.

GLOSSARY OF PANJÂBI WORDS.

Badhâî, *madhâî*, congratulations, congratulatory gifts.
Bâhir, outside.
Bhagatia, a dancing boy.
Bhâṅḍ, a buffoon or actor.
Blaṅḍela, a jester.
Chârpâî, a bed.
Chauk, a square.
Cholâ, a long coat, a cloak.
Dâdl-chuṭâî, meaning.
Ehûne-wâlî, a dancing-girl.
Ghî, clarified butter.
Gaṛ, inspissated juice of the sugar-cane, coarse sugar : molasses.
Janeo, sacred thread.
Jhîmar, a waterman : fem. *-î*.
Kalima, the Muhammadan form of prayer.
Missî, black oxide of manganese used for blackening the teeth.
Nai, a barber : fem. *naiṇ*.
Patâkh, *Ficus venosa*.
Patâs, *Butea frondosa*.
Panchgabbh, *panj-gao*, Hindi *panch-gavya:* the five products of the cow, viz. : milk, curds, butter, urine, and cow-dung.
Pîpal, the sacred fig-tree, *Ficus religiosa*.
Shânti, quiet, calm : so allaying, expiation, exorcism in the Punjab.
Supârî, betel-nut.
Suhâgan, a woman whose husband is alive.
Trewar, *tewar*, a set of three garments.
Zanâna, (here) a eunuch.

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[1] Vermicelli (*siwiân*) is used in order that the moustache may grow luxuriantly like its long threads.

A NOTE ON THE EFIK AND EKOI TRIBES OF THE EASTERN PROVINCE OF SOUTHERN NIGERIA, W.C.A.

By John Parkinson, B.A., F.G.S. (late Principal Mineral Survey).

[With Plates XXIII, XXIV.]

The following notes relate to the Efik and Ekoi tribes inhabiting that part of the Eastern Province of Southern Nigeria, adjacent to the Kamerun frontier.

The Efik occupy the neighbourhood of Calabar, the Ekoi the higher ground to the north, inside, though not extending to, the great bend of the Cross River. The two tribes mingle about the neighbourhood of Oban.

The villages of the Ekoi people are uniformly alike. We approach them by a narrow path through the forest, and, save for the increasing number of farms, often long since disused and overgrown, have little or no warning of the neighbourhood of the "town" until we emerge from the shade of the forest into the glare of the open. The change is abrupt, in a few yards we leave behind the uniformly dense bush and see the close-packed mud-wall huts of the village.

As we set foot in the clearing we find the first of those "medicines," the influence of which in one way or another everywhere dominates the villager's life.

This particular "medicine" takes the form of a long chain of *tai-tai* (creeper) suspended on two poles placed on either side of the path and raised about 10 feet from the ground. A similar chain overhangs the path leading out of the village on its further side, so that from whichever direction we enter we must necessarily pass beneath one or the other. The chains are said, and I believe truly, to be placed across the paths to guard against the introduction of small-pox.[1]

Not infrequently they depend from posts in the centre of the village. (Plate XXIII, Fig. 1.) Sometimes, instead of the *tai-tai*, the hard earthen ant-hill, shaped like an elongated pear, the distal end surmounted by a conical or umbrella-shaped roof, is tied on a stick in turn supported on two poles so as to form a kind of gateway.

This little ant-hill, two feet in height or rather over, is held in some veneration by all the tribes of Southern Nigeria. Frequently we may see it broken from its thin stem and laid across a path, its centre tied round with a strip of cloth and in its mass a hole dug which at one time presumably contained "medicine."

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[1] See Partridge, *Cross River Natives*, p. 243, Fig. 56 ; p. 283, Fig. 74 ; and p. 298.

This custom, designated by the generic term *Owa* or sacrifice (Efik), is commonly resorted to when any disturbing agent in life, such as anxiety or trouble in private or domestic affairs, makes itself felt. There is in the Efik and Ekoi country, and prominently also amongst the Kwa Ibos and Ibibios, a secret society known as Idiong, deeply involved in fetichism. To Idiong, through the mediation of the medicine-man, the plaintiff makes appeal, and after a fee has been paid the remedy is duly announced. It may consist in placing the ant-hill, with the additions noticed above, across a certain path to be named, the rite being accompanied by the sacrifice of a fowl and offerings of eggs, etc. The object of this little ceremony is to cause the defendant unknown to forget his scheme of vengeance, and probably, though this is less willingly admitted, to bring disaster on him in turn.

The ant-hill and sacrifice are left on the pathway and not touched. The rite may be performed either by men or women, and no recognised time of day or of month appears to exist to render the ceremony more efficacious.

One can hardly say how far the influence of Idiong extends into the life of the people, probably originally, if not at the present day, it coloured their entire existence, but of late its influence has been weakened by the society known as Egbo, especially in those centres where the presence and habits of the civilised Efik have made themselves felt.

In Egbo, as now practised, we probably find only the adapted and modified ritual of an earlier and even more barbaric creed; but, be this as it may, no village in the Efik or Ekoi country exists where the Egbo house does not occupy the most prominent position and form the most conspicuous object. Comparatively speaking, much has been written concerning Egbo, but the full and complete history of the original aims of the Society, and of the initiatory ceremonies connected with its nine grades and its complex relations to the beliefs of the people, has not yet and probably never will be made completely known, owing to the fact that its members are under a strict pledge to reveal nothing.

The Egbo houses[1] of the Efik and Ekoi countries are identical in all essential particulars; the house (Plate XXIII, Fig. 2) is a long rectangular shed with mud walls and a V-shaped roof, with two large openings or doors separated by a central wooden support and capable of being closed by wooden hurdles drawn across them. At the far end of that at Okarara (on the south-eastern border of the Oban Hills) is a dais with a small door on either hand leading to an outer room, extending the whole width of the building, and containing the masks and dresses of the Egbo dancers. Two columns coloured grey, orange, white, red and black support the roof, and have barrel-shaped bases forming a kind of table around each. The farthest column carries a screen on which are arranged the skulls of kids and goats, while on the wall at the back of the dais is hung a large plaited mat; on this are fastened three pig-skulls in the centre and an edging of kids' skulls surrounding all. On a transverse beam dangle eight drums of the usual native type (*Ekamo*), made of a slightly conical piece of hollow wood and an untanned hide stretched across the larger end.

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[1] See Partridge, *Cross River Natives*, p. 60, and pp. 208 *et seq.*, p. 34.

Immediately in front of the farthest column stands the most interesting thing in the room. (Fig. 1.) This is a very conventionalised human figure. The head is represented by a feather cap, the arms by two feathers standing out from either side, the body is a cylindrical piece of wood, coloured white and yellow in broad horizontal stripes. At the base of the body is a slightly hollowed horseshoe-shaped dish, while the lower edge is tied round with a "sash" of some white material, with dingy rosettes dangling on either side. Immediately above the dish are three flattened pieces of bronze or brass, hooked at the ends, and on either side run up brass rods, bent into curves like those assumed by a worm or a snake. It is, of course, impossible to obtain full details of these things, all of which doubtless have their own meanings, concerned with the religion which one cannot but suppose was the fundamental element in Egbo, whatever it may be now.

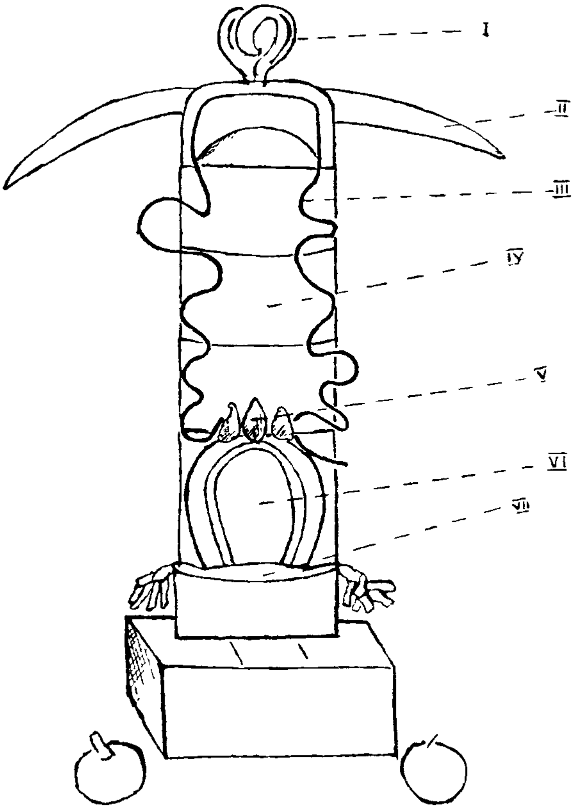

FIG. 1.

I. Feather cap or head. II. Feather "arms." III. Brass rods representing snakes. IV. Yellow and white "body." V. Bronze knives. VI. Horseshoe-shaped dish. VII. White cloth "sash" and rosettes.

I was told by a very intelligent man, not a member of Egbo, but of good family, that the bent rods represent snakes, which, were the head of the figure removed, would in truth turn into snakes and kill the offender. By removing the head was apparently meant a very serious offence, for my informant continued to say that for minor crimes the three blades of bronze were used to kill the offender by incisions above the ears. No one, of course, admits for a moment that this is now done. The slightly hollowed dish is provided for the head Egbo priest to drink from and is used by no one else. Sacrifices of goats, etc., are periodically made before the figure and their skulls placed on the screens.

The outsides of the Egbo houses are sometimes roughly coloured in panels, but on the Cross River, in the neighbourhood of Okuni, attempts at clay bas-reliefs are not uncommon and represent such objects as a coiled snake, a crocodile, a man, leopard, etc.[1]

As mentioned above, Egbo is a society having nine grades, the entrance to successive grades being dependent on the sums of money fixed as entrance fees, but twelve months must elapse between each admission. Each grade has its peculiar ritual, its dances and dress, and to the novice successive mysteries are shown, proper to the grade he is about to enter and peculiar to it. At the present day Egbo is largely a trading society, allowing facilities for trade in proportion to the grade to which the member belongs. Suppose, for instance, a member is travelling on a trading expedition and arrives at a village while an Egbo play of a certain grade is in progress; if he has attained to the grade to which the play being performed belongs, or if the play is of a lower grade, he is allowed free access to the town; the leaf carried by the Egbo dancer is lowered before him in acknowledgment of his social position, and all facilities are offered for the accomplishment of his mission. If, however, the opposite is the case he is kept outside the town until the completion of the play. In front of every Egbo house, or rarely in a small shed by its side (Plate XXIII, Fig. 3) stands the big drum, named Obudum (an onomatopoetic word)[2] made out of a log of wood, and having a long slit on its upper surface. Two small sticks are used to beat it, and, properly managed, a deep booming sound is produced, heard for a great distance. Our trader, we may suppose, has a certain debt to collect; he sounds the drum and the members of Egbo in the village hasten to hear his complaint and rectify the grievance. The debtor's goods are seized, the traveller's claim duly satisfied, and the remaining effects confiscated by the other members of the Society.

In front of an Egbo house a bushy tree with dark green leaves, called by the Ekoi people *ucomma*, may not infrequently be seen. The chief of the village of Akwa Ibami, a man whose hair was beginning to turn white, told me that when he was a boy that tree was little higher than himself. In 1904 the trunk was some 14 inches in diameter. This tree is reverenced by the people as a minor deity, and round its base is gathered a pile of stones, contributed by passers-by who have knocked their feet against the stones of the rough rocky street of the village. The stone is picked up and cast at the base of the *ucomma-tree*, for, by so doing, further injury on the journey will be escaped. This belief may be compared with the practice of throwing sticks and stones on cairns mentioned by Dr. Haddon.[1] He suggests that we have here "acts of ceremonial union with the spirit identified with the well, tree, stock or cairn."

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[1] See C. Partridge, *Cross River Natives*, p. 208.

[2] *Ibid.*, p. 222.

I incline to think that the right to make the bull-roarer and whirl it, and thereby exact toll (*pay Egbo*) is allowed to one of the lower of the Egbo grades. No Efik or Ekoi woman may of course see the bull-roarer.

The advantages to be derived from Idiong are, unfortunately, more obscure, the grades are not exactly identical with those of Egbo, for the material profits to be derived by money payments to the priest of Idiong are numerous if not numberless, but for certain special services special payments are made, leading to special initiations into certain rites. These initiations are limited to four or five, and it is probable that they are more or less equivalent to the grades of Egbo. The office of priest of Idiong does not appear to be hereditary, for this dignity may be attained by any member of the Society. The aspirant to the distinction uses his powers of observation, learns the medicine for, and the details in connection with, the remedying of any trouble, and is in time enabled to apply these powers for himself. Divination is commonly used by the priest of Idiong, frequently by the use of some small object such as a nut (compare the Babalowo of the Yoruba)[2]; in the Calabar district the seed of the wild mango (*Iringia barteri*) is commonly used. By the way the nut falls the disturbing cause is ascertained. It is perhaps noteworthy that a man may belong to both Idiong and Egbo, though the expense of admission into any but the lower grades of the latter society is a serious deterrent.

The outward and visible signs of Idiong are the small mud simulacra of various deities occupying little thatched houses, generally placed outside a village.

Inside the village, in the public places and in the courtyards of the houses are numerous jars containing "medicine," supported on sticks with a tripod fork at the top. Such a stick or a group of such sticks are the commonest objects in the villages of the Calabar district, either arranged in the centre of the town near the Egbo house, where they are for public use (the "medicine" for smallpox falls under this head), or in front of the houses themselves.

These things have no connection with Idiong, at least no necessary connection, they are, in fact, the so-called *juju*. They provide for the healing of various common complaints (Plate XXIV, Figs. 1, 2, and 3), for increase of family, for aid in childbirth, and many other purposes.

An illustration of the "medicine" for smallpox in the village of Uyanga (Oban Hills), is given on Plate XXIV, Fig. 4. It is called *okomono*, and is formed of three or four dead sticks gathered together at the top; and supporting, at about 3 feet 6 inches from the ground, an earthenware pot containing the "medicine." An empty snail shell is used for administering it, which may only be done by the medicine-man. The cost of the contents of the pot were stated to be £3 10*s.* 0*d.*, a very large sum for these people, collected by the clubbing together of the inhabitants of Uyanga and the surrounding villages.

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[1] *Magic and Fetishism*, p. 8.

[2] *The Yoruba-speaking Peoples*, Ellis, p. 57.

Amongst the components of these "medicine" erections, eggs figure prominently, and I have seen flat quartz pebbles, rings of doubly twisted wire, etc., all of which doubtless had definite meanings or definite uses, in many instances probably arising from the native belief in sympathetic magic. Numerous societies, local in their influence and thus less important than either Egbo or Idiong, have their centres in certain villages.

The chief feature is commonly a powerful "medicine," the property of or controlled by the chief, and the advantages to be derived from participation in this are obtainable by initiation into the society. A small sum of money is paid on admission. An example is the *ofri* of Ekong in the Calabar district.

In this connection it may be interesting to record an occasion on which my friend Mr. L. H. L. Huddart and myself were asked to be instrumental in the formation of a new society. For some months we had been working on matters mineralogical up and down the rocky beds of the rivers of the Oban Hills. We had with us a gang of Eket carriers from the Ibibio country, and, on the conclusion of our work, their headman showed us some large smooth white quartz pebbles, and intimated that on his return to his people he intended to start a "Big Stone Society." On the upper waters of the Calabar River all the men had been greatly struck with the enormous rounded masses of gneiss, 20 feet or more in diameter, lying like gigantic boulders on the almost dry bed of the stream. They told us they had seen nothing like it before, and this was doubtless true, as their own country is flat and not rocky.

The quartz pebbles were intended as a sign, no doubt, of the greater things that existed elsewhere, but not relying entirely upon these, the headman asked for a "book," *i.e.*, a written statement of the facts, in order to start the society with proper *éclat*. As we were universally known as the "white men who break stones for [in the] bush," we were, of course, the most suitable persons to grant the inaugural charter.

In some instances the *ufok ibiok* (miniature medicine-houses or sheds) afford shelter for the simulacra of a deity and his wife to whom offerings are made, at, for instance, the time of the yam harvest, to ensure satisfactory results.

One such, a few hundred yards outside the village of Akwa Ibami, on the western side of the Oban Hills, is called *atákwa*. In the same village other devices are employed, to ensure a successful farming and a good yam harvest.

In regard to such a one we learn that certain "medicines" are buried in the earth forming the floor of the little thatched shed, are covered by a pile of sand and soil taken from the floor and raised into a semi-ellipsoidal mound about 16 inches in height. In front of this mound is sunk a small earthenware bowl containing water and more "medicine," the latter generally the leaf of a plant. The sacrifice of a fowl or of a goat is made inside the house, and the assembled

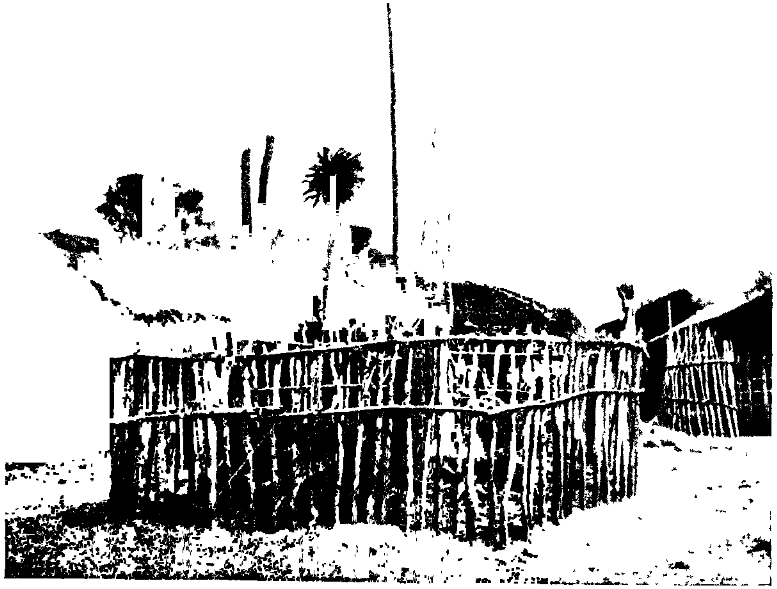

FIG. 1.—NDEMUSAM, SMALL POX "MEDICINE," EKONG, SOUTH EKOI COUNTRY.

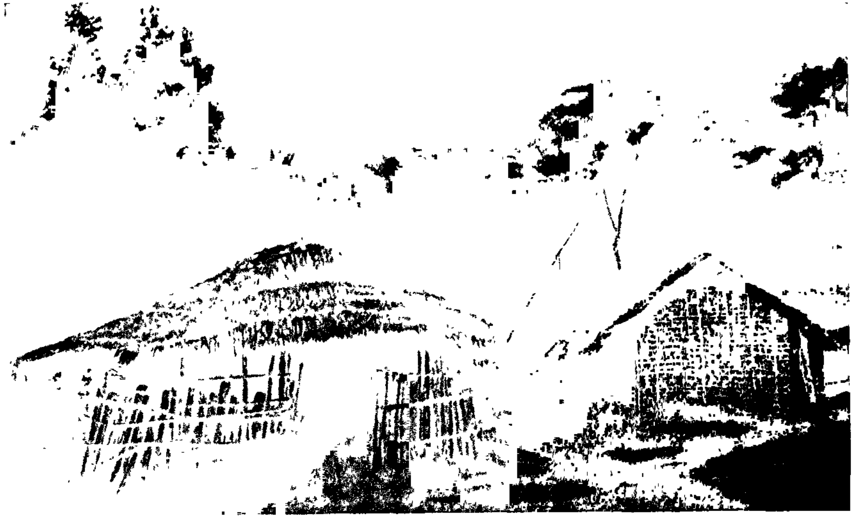

FIG. 2.—EGBO HOUSE AND NATIVE HUT (ON RIGHT), EKOI COUNTRY.

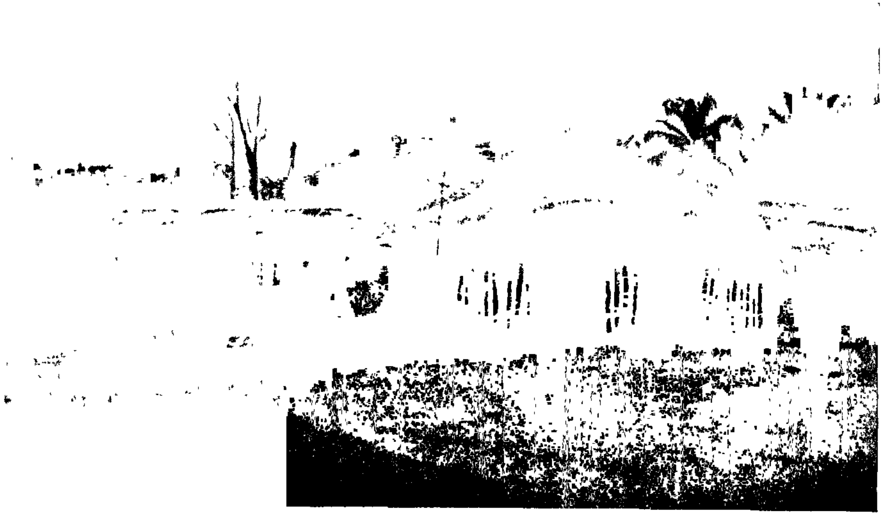

FIG. 3.—EGBO HOUSE AND OBUDUM (ON LEFT), ABONG, EKOI COUNTRY.

NOTE ON THE EFIK AND EKOI.

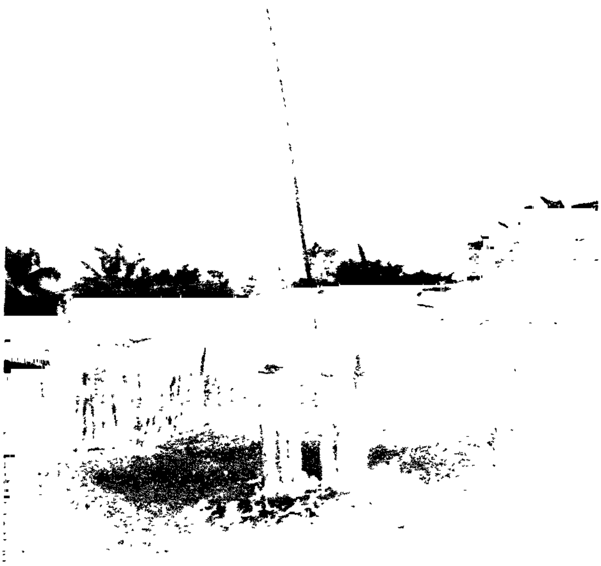

FIG. 1.—"MEDICINE" FOR FEVER AND SMALL POX, EKOI COUNTRY.

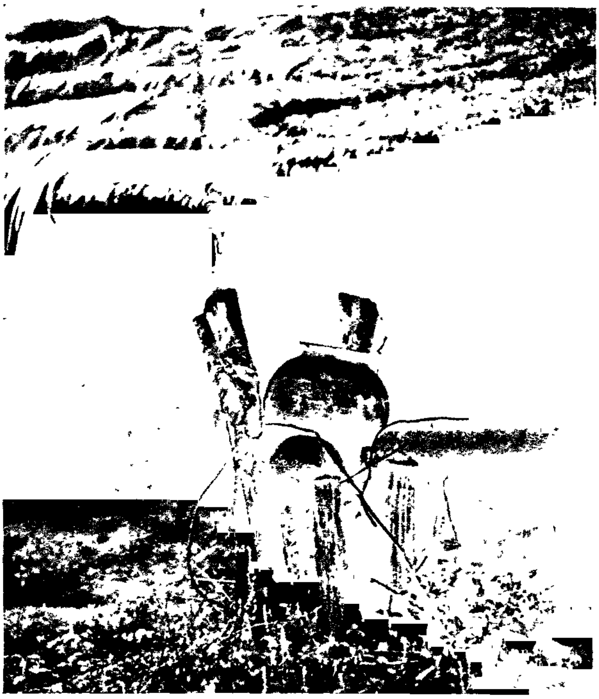

FIG. 2.—"MEDICINE" ERECTION FOR FEVER, UYANGA, EKOI COUNTRY.

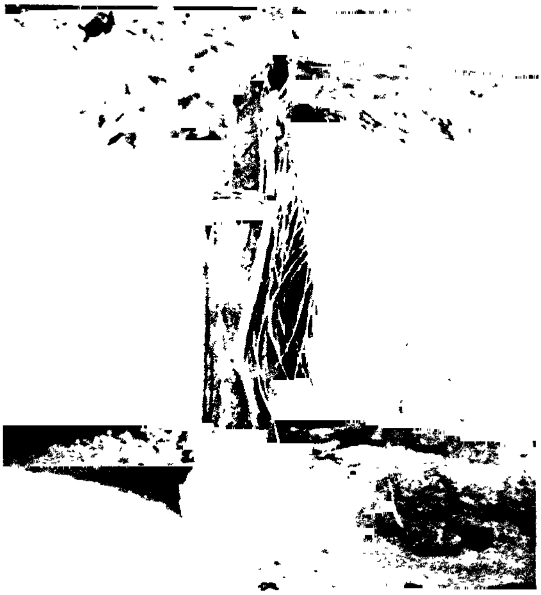

FIG. 3.—"MEDICINE" IN COURTYARD OF HOUSE PRESERVING HOUSE FROM THEFT OR DISASTER, ABONG, EKOI COUNTRY.

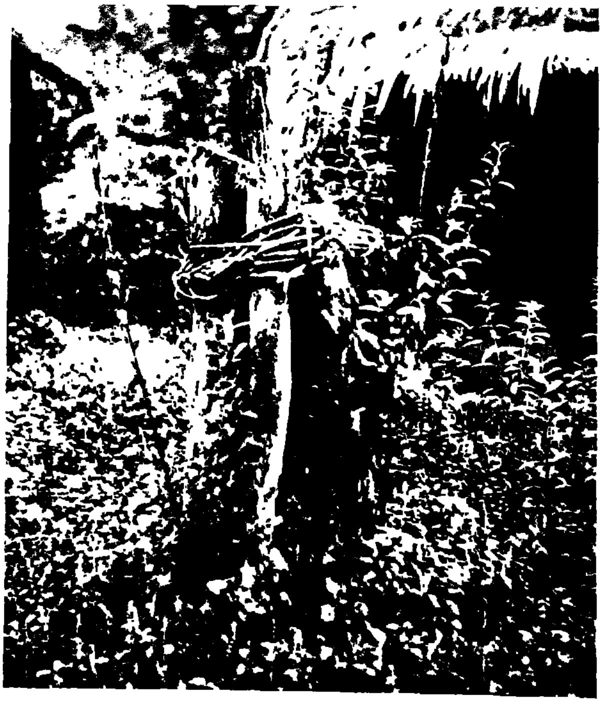

FIG. 4.—OKOMONO, SMALL POX "MEDICINE," UYANGA, EKOI COUNTRY.

NOTE ON THE EFIK AND EKOI.

villagers eat small portions of the flesh, together with, I believe, water from the bowl.

Seven pieces of the sacrifice are then placed on leaves with oil and "medicine" and carried to the new farm about to be planted. The fragments are left on the newly cleared land. We now obtain another hint of the hold of Idiong on the people, for the "medicine" buried under the central mound is not replaced except at the command of the Idiong man, who obtains the knowledge as to which way to give his decision from the Idiong shrine.

A "play," *i.e.*, a ritualistic dance, is performed on the occasion of the ceremony.

Common also in the Ekoi villages is a shrine containing "medicine" peculiar to and the special property of the community, and called by a special name differing from village to village. It is used for the detection of guilt by the ordeal by poison. In some instances, at least, the name is taken from the particular poison used, a tree or shrub for instance, and which, with other medicine, is kept inside the *ufok ibiok*.

As a rule, this class of medicine-house is kept tightly closed, but on one occasion when the fastenings were insecure I found the interior in a decaying state and containing a multitude of objects. A shelf extended the whole length of the hut, and on this and on the floor were bells, broken hand-cuffs, old boxes with nailed sides and hence European, ox horns, a toby vase of the familiar English type and four or five human jaws tied together, with most of the teeth missing. On the floor was a bronze jar with handles and clearly of European origin. The chiefs of the village contrived to evade all my questions concerning the ceremony of which these things were significant.

The mud figures in the miniature medicine-houses are connected with various duties such as the general safety of the town. Belonging to this category is the *emon* of 'Ndengani in the Calabar district. The figure resides in a miniature shed, rather resembling a cage and placed under the veranda of a house in the main street.

Smaller figures are left at haphazard around the base of the central object; feathers lie here and there, and on the face are the smears of food offerings. It is usual, should trouble come to any person in the village, to find the cause in the action of a disturbed or restless spirit, commonly the ghost of a deceased person, and prayer is made to the *emon* by a priest of Idiong. A reward, if one may so put it, is given to the protecting deity by presenting food, which, it would seem, to avoid mistake, is placed on and round his mouth. In addition to this special and individual work, the *emon* roams the village at night, driving away malefactors, incarnate or otherwise, as a public duty.

THE NATIVE TRIBES OF SOUTH-EAST AUSTRALIA.

By A. W. Howitt, C.M.G., Sc.D.

I regret to say that in reading Mr. Lang's work, *The Secret of the Totem*, I have found many passages, in his criticism of my *Native Tribes of South-East Australia*, to which I must take exception. Some appear to be misquotations and others, perhaps, misapprehensions of my meaning.

Such passages occur throughout the work, but especially in Chapter III, to which I now wish to direct attention.

It will perhaps be more convenient to deal with them in the order in which they occur, than to attempt to group them according to their subjects.

Before doing so, however, I must point out a statement of my own which requires correction. There are at pages 179 and 182 of my *Native Tribes of South-East Australia*, two passages to the effect that "every woman becomes a *tippa-malku* wife, before she becomes a *pirrauru wife*." I was not satisfied with this statement, and, when preparing the final revise of my work for the press, I made further special investigation, with the result as stated at page 182, that on certain occasions " . . . the whole of the marriageable or married people, even those who have already *pirraurus*, are reallotted, the *kandri* ceremony being performed for batches of them at the same time."

A girl does not become "marriageable" until after being initiated into womanhood, at the *wilpadrina* ceremony (*op. cit.*, p. 644). It is therefore incorrect that every woman becomes a *tippa-malku* wife before she becomes a *pirrauru* wife.

Owing to a regrettable oversight this correction was omitted when the revise was made.

I think that Mr. Lang has directed his arguments principally against *pirrauru* marriage, but also against the exceptional inter-sexual license which, as Messrs. Spencer and Gillen show, is practised, under certain circumstances, by the Central and Northern tribes; also by those of the Lake Eyre district, and in fact occasionally by all the tribes of South-East Australia.

Although I shall specially consider Chapter III, there are some parts of the preceding chapters which must be noticed as leading up to the subjects discussed in it by Mr. Lang.

After describing his "method of inquiry," which appears to be by a system of guesses or conjectures (pp. 21–24), Mr. Lang arrives at "five courses which conjecture can logically take" (p. 31).

Of these five conjectures he says (p. 33):—"The fifth theory (*e*) was that of Mr. Howitt. He now adopts the similar theory of Mr. Spencer." That is to say, Mr. Lang's second conjecture (*b*) at p. 31.

This result is very instructive as a means of ascertaining the value of this method when applied to my case, since by it the other conjectures may be appraised.

The theory which he says "was" mine may for convenience be separated into its component parts thus: (*a*) men were at first in a promiscuous incestuous horde; (*b*) perceiving the evils of this condition . . . they divided it into two halves, of which one must never marry within itself, but always in the other. (*c*) to these divisions animal names were given; they are the phratries. (*d*) They threw off colonies, or accepted other groups, which took new animal names, and are now the totem kins.

I think there must be some misconception on Mr. Lang's part when he attributes this theory to me. I do not know where to look for it as he gives no reference, and the language in which it is stated is certainly not mine.

Mr. Lang says at page 36, after speaking of Professor Spencer's "theory," that totemic societies arose "*before* man regulated marriage in any way," and that "To work co-operative magic was their primary function. To that opinion Mr. Howitt has now come in," and he adds that, "the division of the tribe" (into the two primary exogamous moieties or phratries, or "classes") "was made with intent to regulate the relations of the sexes." Mr. Lang gives in a footnote, as his authority for the above statement, my *Native Tribes*, p. 89. On reference to that place the reader will find that in the paragraph in question, I refer to two native legends which profess to explain how the division of the tribe came about, and I then say, "I have considered them fully in Chapter VIII, and need only mention here that they agree in the essential point that the division of the tribe was made with the intent to regulate the relations of the sexes."

This is very different to what Mr. Lang says, for I do not "add" the above statement to the opinion quoted as to "co-operative magic."

There is a previous passage at p. 4 in Mr. Lang's work where after pointing out what he calls "a prevalent fallacy," he says, " . . . in these hordes a certain law, 'The universal basis of their social system, was brought about by intention,' as Mr. Howitt believes." (The reference to this question is p. 89 of my *Native Tribes.*)

He then proceeds: "The law in question, 'The universal basis of their social system' was nothing less than a rule compelling people who had hitherto been promiscuous in their unions, to array themselves into a pair of tribal divisions."

The explanation of the quotation is Mr. Lang's own, although he says towards the end of the page, "This postulate cannot be granted."

The inference to be drawn is, as I see it, that I must postulate, what Mr. Lang says cannot be granted. I do not postulate this, nor is it necessary, unless to complete Mr. Lang's objections.

The incorrectness of these quotations would not be worth mention, were it not that each has been made a medium for what seems to be intended as a destructive criticism of my theory of the origin of the two exogamous classes, and thereby to advance Mr. Lang's own rival theory, which is stated at length in the latter part of his work.

Mr. Lang occasionally varies his adverse argument by making use of ridicule. For instance, he asks at p. 37 :—

" . . . what made the very original medicine man, the Moses of the tribe, think of the new and drastic command which he brought down from the local Sinai? Why did this thinker suppose that the relations of the sexes ought to be regulated? Perhaps the idea was the inspiration of a dream."

This seems not at all unlikely, and perhaps in the above passage Mr. Lang refers to what he has said at p. 53 of his " Making of Religion " which I now quote as the reply he asks for.

" Whence came the moral element in Jehova ? One may surmise that it was the survival of the primitive divinely sanctioned ethics of the ancient savage ancestors of the Israelites, known to them, as to the Kurnai, before they had a pot or a bronze knife, or seed to sow, or sheep to herd, or even a tent over their heads."

Since he therefore believes that the Kurnai received " divinely sanctioned ethics " why does he not also suggest that the man whom he calls " the Moses of the tribe " received a " divinely sanctioned " mission to regulate the sexes ?

Mr. Lang asks two questions at pp. 46–53 as to the *noa* relation, first whether " because a man calls his wife his *noa*, and also calls all women whom he might have married his *noa*, therefore all these women in past times would have been his wives." Second, " Will anyone say originally all *noa* people were actual husbands and wives . . . ? "

No one will say so who has the necessary knowledge of what the *noa* relationship is. The sequence of matrimonial changes, counting from the present to the past, seems to have been on the following lines. Betrothal (*tippa-malku*) is a temporary restriction of the *pirrauru* claim over a certain *noa* woman ; the *pirrauru* marriage is a restriction of a former wider license within the *noa* group.

On this view the answer to Mr. Lang's question is that there could not be any *noa* men and women till the *noa* relation came into existence.

That the Dieri relationship was intended to effect a new restriction on marriage, seems evident when one compares the Dieri rule with that of the Urabunna. With the latter tribe a man's *nupa* is his mother's elder brother's daughter, but with the Dieri a man's *noa*, the equivalent of *nupa*, or as we may term it the potential wife, is his mother's mother's brother's daughter's daughter. By this rule the potential wife is removed to the next generation.

I now come to what I have called group-marriage, or to use the Dieri term, *pirrauru*, to which Mr. Lang gives much attention. He also, I think, uses the Urabunna term *piraungaru* as a synonym. I shall use the Dieri term, unless I specially refer to the Urabunna or the Kurnandaburi tribes, when I shall use *piraungaru* and *dilpa* respectively.

Mr. Lang asks (p. 39), " . . . is this *piraungaru* custom, as we think, . . an organised and circumscribed and isolated legislation among a few tribes, of the utterly unbridled license practised by many savages on festive occasions. . "

At page 55 Mr. Lang continues the same argument thus: "It is an isolated 'sport' among the Dieri, Urabunna, and their congeners. Being thus isolated, *pirrauru* cannot claim to be a necessary step in evolution from 'group-marriage' to 'individual-marriage.'" The whole of this argument therefore rests upon the "isolation" of "a few tribes."

The few tribes are added to by saying, "It may, however, though the point is uncertain, prevail, or have prevailed, 'among all the tribes between Port Lincoln and the Yerkla-mining at Eucla,' that is, wherever the Dieri and Urabunna phratry names, Matteri and Kararu, exist."

In the next sentence Mr. Lang practically adds also the Kurnandaburi tribe. Taking the localities mentioned by Mr. Lang as indicating the area occupied by tribes which have a marriage of the *pirrauru* type, or had it before they became extinct, after the occupation of their country by white settlers, and making all allowance, the area is not less than 200,000 square miles. This area is considerably larger than the United Kingdom of Great Britain and Ireland, which is 121,000 square miles.[1] Can it therefore be said that *pirrauru* is circumscribed and isolated ?

At p. 48 there is the following passage: "We catch the Urabunna and Dieri at a moment of development in which the abandonment of strict possession of a wife is compensated for by a legalised system of changing partners, enduring after the feast of license is over. But even so, a man is responsible, as father, for the children of his actual wife, not for the children of his *piraunguru* paramours. For these their actual husbands (*tippa-malku*) are responsible."

So says Mr. Lang, but he gives no authority for his statement, nor does he say to whom the "mau," that is, the *tippa-malku* husband, is responsible. When I know where to find the above statement and who is the author of it, I may have something more to say.

In footnote 2 at page 50 Mr. Lang says, "What *dilpa mali* (legalised paramour, or 'accessory wife or husband') means in Kurnandaburi Mr. Howitt does not know." But he learns *kodi-mali* (applied to *pirrauru*) means "not *nubaia*," that is, "not legal individual husband or wife."

Mr. Lang does not give any reference, but I think that he refers to a pioneer work, to be found in the Smithsonian Reports for the year 1883, in which my real statement is at page 10. It is as follows: "The term *dilpa-mali* I cannot explain. I am told that the word *kodi-mali* means 'nothing' in the sense of negation of something, of which *nubaia* is the expression."

That information is twenty-one years old and has been corrected and cancelled by my *Native Tribes of South-East Australia* in 1904. I may now explain that the term *kodi-mali* is the equivalent of the Dieri *yimarimara*, that is, the relationship of husband's brother and wife's sister; *nubaia* is the equivalent of the Dieri *tippa-malku*, and therefore is what my earlier explanation says in a roundabout manner.

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[1] H. R. Mill, *The International Geography*, 1899, p. 174.

I do not understand why Mr. Lang seems to quote by preference statements out of old pioneer works, rather than the latest out of my *Native Tribes*, for he cannot be unaware of the latter work, since he quotes it, as to some of his statements. Is it, perhaps, because some of the older statements are inconsistent with the later, and therefore fit in better with his adverse comments?

At p. 49 Mr. Lang writes as follows:—"The Dieri case of the feast of license just mentioned is notable. 'The various *Piraurus* (paramours) are allotted to each other by the great council of the tribe, after which their names are formally announced to the assembled people in the evening of the ceremony of circumcision, during which there is for a time a general license permitted between all those who have been thus allotted to each other.' But persons of the same totem among the Dieri may not be *Piraurus* to each other, nor may near relations, as we reckon kinship, including cousins on both sides." To this quotation is the footnote, *J.A.I.*, pp. 56–60, August, 1890. I think that the pages quoted must be in error, as I have carefully gone through them and cannot find the above passage. I shall, therefore, be much obliged if Mr. Lang will give the page at which it occurs; but I must point out that the word paramours is not mine.[1]

In the footnote to page 52 Mr. Lang asks several questions which need some reply. (1) "May girls *tippa-malku* ('sealed') to a man have relations with other men before their actual marriage, and with what men? If Mr. Lang had looked at page 664 of my *Native Tribes* he would have found an answer to part of his question in the *wilpadrina* ceremony and to the other at page 182—"the whole of the marriageable or married people . . . are reallotted, the *kandri* ceremony being performed for batches of them at the same time." A girl after being initiated into womanhood at the *willpadrana* ceremony is marriageable. (2) "If *pirrauru* arises through the exchange by brothers of their wives, how can an unmarried man who has no wife become a *pirrauru*?" As to this, see the second paragraph on page 183 of *Native Tribes*, "the *pirrauru* of an unmarried young man, etc." Such a *pirrauru* would be obtained by the young man after, say, the *mindari* ceremony. (3) "When *pirrauru* are reallotted (p. 182), does the old connection persist, or is it broken, or is it merely for the festive occasion? How does the jealousy of the *pirrauru*, which is great, like the change?" When allotted to each other the *pirrauru*, as I have said, remain in that relation afterwards. If a *pirrauru* is jealous, the two men in question might fight, but such cases would be severely treated by the elders if the further allotment had been made by them at some ceremony.

I think that Mr. Lang takes my term "reallotted" in a sense in which I did not use it. Although a man or a woman is reallotted on such occasions, it does not mean that the pre-existing conditions of *pirrauru* are abolished. In future I shall use the term "further allotted," which will, I think, avoid any misunderstanding.

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[1] Mr. Howitt is in error; the footnote does not refer to the passage he quotes, but to one higher up on the page. As, however, the point seems to lie in Mr. Howitt's request for the reference, and communication with him is impossible, the passage is left without alteration.—EDITOR.

Mr. Lang says at p. 51, "I have so far given Mr. Howitt's account of *pirrauru* (the name is now written so by him) among the Dieri, as it appeared in his works prior to 1904. In that year he published his *Native Tribes of South-East Australia*, which contains additional details of essential importance (pp. 179–187)."

The earlier works to which Mr. Lang refers are given in a list at pp. viii–ix, of the preface to my work, with the exception of one—*The Dieri and other kindred tribes of Central Australia*, which I find was omitted. It appeared in the *Journal of the Anthropological Institute*, vol. xx, in the year 1890.

I point out in that preface that the several chapters of the *Native Tribes* "in one aspect are those memoirs elaborated," and that some of the views expressed in them have been modified by a wider experience and more mature consideration.

In the preparation of my *Native Tribes* I extracted those parts of the earlier publications, which I required for use, without amendment. Other parts I re-wrote or amended, so as to bring them into accordance with later evidence, while some I rejected because I was not satisfied that they were correct, or because I had found them to be incorrect. This applied especially to the above-mentioned account of the Dieri, much of which I omitted because I found that Mr. S. Gason's information was not altogether reliable. Such an instance is mentioned at p. 664 of *Native Tribes*.

Had I foreseen that Mr. Lang would consider my work of 1904 merely a continuation of the successive pioneer works of the previous twenty-one years, I should have said distinctly in it, as I now say, that my *Native Tribes of South-East Australia* supersedes and cancels all my earlier publications, excepting such passages as are the same in both, or which do not conflict with later statements.

An instance of the inaccuracies which occur in my early account of the Dieri is that which Mr. Lang employs at pp. 50–51, where he says, "a woman becomes the *noa* of a man most frequently by being betrothed to him when she is a mere infant . . . " This, on the face of it, is corrected by what I say as to the *noa* relation and the *tippa-malku* betrothal in *Native Tribes*, pp. 177–180.

I am at a loss to think how Mr. Lang can have overlooked this when quoting a pioneer work fourteen years old.

Mr. Lang says (p. 53) that *tippa-malku* "is demonstrably more primitive than *pirrauru*, for *pirrauru* is unthinkable except as a later and isolated custom in modification of *tippa-malku*."

Tippa-malku, that is the betrothal, for instance, of a boy and a girl, is certainly an earlier ceremony than the *kandri* ceremony between the boy when grown up and some woman, or between a woman and a man, both of these cases being *pirrauru* marriage. But, as I see the evidence, marriages which have been brought about by betrothal, or gift of a woman, are an encroachment upon the earlier group-right of *pirrauru* marriage. I shall refer to this later on in discussing the terms of relationship in use by the tribes which have only individual marriage.

Pirrauru exists in Central Australia to this day, and should not be "unthinkable" to Mr. Lang, because he says at p. 52, "I am ready to allow that the *kandri* ceremony, a symbol of recognised union, like our wedding ring, or the exchanged garlands of the Indian Ghandava rite, constitutes, in a sense, marriage, or a qualified union recognised by public opinion. But it is a form of union which is arranged subsequently to the *tippa-malku* ceremony of permanent betrothal and wedlock . . . ." I refer to this part of the passage later on.

As to his statement that *pirrauru* is an "isolated custom," I have already replied to it, and need not say more.

Mr. Lang then continued his argument thus: "On Mr. Howitt's theory, group marriage . . . came next after promiscuity. All persons legally intermarriageable (*noa*) under phratry laws, were originally, he holds, *ipso facto* married. Consequently the *kandri* custom could not make them *more* married than they then actually were" (p. 53). Mr. Lang does not give any reference to the work from which, it is to be assumed, he extracted what he calls my "theory." When I know this, I may have something more to say.

At p. 52 there is the following passage: "A 'group wife' I think no woman becomes. She is never the *pirrauru* of all the men, who are *noa* to her, that is, intermarriageable with her. She is merely later allotted, after a symbolic ceremony, as a *pirrauru* to one or more men who are *noa* to her."

Here Mr. Lang has not mastered the elements of his subject, for at p. 182 of *Native Tribes* I say, "But commonly it is not merely two pairs of *pirrauru* who are allotted to each other, but the whole of the marriageable or married people, even those who have already *pirraurus* are reallotted, the *kandri* ceremony being performed for batches of them at the same time."

But it must also be remembered that though all the people may be further allotted, this is done not indiscriminately or in bulk, but as to the corresponding *noa* groups, members of which are thus allotted. The whole tribe consists of such groups.

At p. 54 there is a very positive assertion, where he says, "As for 'group' marriage there is nothing of the kind; no group marries another group, the *pirrauru* literally heap hot coals on each other if they suspect that their mate is taking another of the 'group' as *pirrauru*."

As the people are from time to time further allotted as *pirrauru*, and as once a *pirrauru* always a *pirrauru*, it is manifest that a "group," that is, a number of people, does, in fact, in time, become married to another group. Is not this the marriage of group to group? The latter part of the statement is quite beside the fact in question, and I have not quoted it.

Mr. Lang makes the following remarks at p. 54:—"*Pirrauru* is a modification of marriage (*tippa-malku*), *tippa-malku* is not a modification of 'group marriage.' If it were, a *tippa-malku* husband 'specialising' (as Mr. Howitt says) a woman to himself, would need to ask the leave of his fellows, who are *noa* to his intended *fiancée*." To this there is a footnote, "Or his seniors would have to ask it. But his kin could not possess the right to betroth him before kinship was recognised, which, before marriage existed, it could not be."

I have fully explained, in pp. 177–182 of *Native Tribes,* how the *tippa-malku* betrothal and the *tippa-malku* and *pirrauru* marriages are brought about. But it will be necessary to speak of it here, to explain the mental confusion which is evident in the above statements. The *tippa-malku* betrothal is by the mother of the girl on one side and the mother of the boy or man on the other, with the concurrence of mother's brothers.

It is they, and not the "*tippa-malku* husband" who specialise the girl "to himself," and as I point out at p. 177, the respective fathers have no part in the arrangement, nor do his "seniors," who ever they may be according to Mr. Lang, concern themselves with a matter which does not concern them.

The males of the *noa* group into which the boy or man was born have no more than he had, namely, a potential right to obtain a wife from the corresponding female *noa* group, if they can get her by betrothal, gift, or as a *pirrauru.* Therefore, his fellows have no concern in the matter, nor does anyone ask their "leave."

The sentence which completes this footnote is remarkable, for it speaks of a time "before kinship was recognised, which, before marriage existed, it could not be."

I am quite unable to explain the meaning of this statement as to the existing *tippa-malku* betrothal, but no doubt Mr. Lang can do so.

As I understand, the whole proposition by Mr. Lang is that *pirrauru* is a modification of individual marriage. But these arguments with which he supports it are certainly of no force. Certain other statements are made which for convenience I shall consider together. "But among these primitive south-eastern tribes *pirrauru* is no more found than subincision" (p. 55); "among the most pristine of all tribes, in the south by east, *pirrauru* is not found" (p. 56). He does not explain which these tribes are, nor does he say where the "south by east" country is, but he then refers to the Wiimbaio, the Geawe-gal, the Kuinmurbura, the Wakelbura and the Narrangga, where "we find no *pirrauru,*" but I am quite willing to accept them as instances.

Later on I will show why it is that these people have not the *pirrauru*-marriage and what I say then will apply to all the tribes of South-East Australia excepting those of which the Dieri is the type.

At p. 57 he criticises what I say as to the *tippa-malku* betrothal, quoting from pp. 177–178 of *Native Tribes.* In order that the matter at issue may be clearly seen I must now quote him.

"Mr. Howitt on this point observes that if the past can be judged by the present, 'I should say that the practice of betrothal, which is universal in Australia, must have produced a feeling of individual proprietary right over the woman so promised.' Manifestly Mr. Howitt is putting the plough before the oxen. It is because certain kinsfolk have an acknowledged 'proprietary right' over the woman that they can betroth her to a man; it is not because they can betroth her to a man that they have a feeling of individual proprietary right over her."

I regret very much that Mr. Lang has so far misunderstood me as, apparently, to turn round my statement, so as to look his way, and not mine. My statement will rightly refer to the individual man to whom the woman is betrothed and not to the mother by whom she is betrothed, as Mr. Lang states. It is Mr. Lang who has put the plough before the oxen. I regret to feel that in this, it looks as if, by doing so, he makes it suit his argument better.

In the preceding paragraph (p. 56) Mr. Lang is also in error in saying, "They who give this woman away and they who give away her bridegroom also, are the brothers of the mothers of the pair, or the mothers themselves may arrange the matter." He quotes p. 177 for this, but what I say there is "The *noa* relation becomes specialised by the betrothal of two children . . . arranged by their respective mothers, with the concurrence of the brothers of the mothers of the girl." This is one of a number of instances of misquotation by Mr. Lang.

At the end of p. 57 Mr. Lang makes a further statement saying, " Mr. Howitt here adds that the 'practice of betrothal . . . ' (or perhaps he means, 'the feeling of individual proprietary right' ?) 'when accentuated by the *tippa-malku* marriage, must also tend to overthrow the *pirrauru* marriage.' Of course we see on the other hand and have proved, that if there were no *tippa-malku* marriage there could be no *pirrauru* to overthrow," pp. 57–58.

The proof to which he refers is, I think, the passage at p. 54 which I have dealt with, beginning, "*pirrauru* is a modification of marriage (*tippa-malku*) . . . ," on my part I think that I have shown his so-called proof to be deductions from false premises.

At the last page of Chapter III Mr. Lang finally concludes his objections to *pirrauru* as follows:—

"As to the *pirrauru* or *piraungaru* custom, moreover, Mr. Howitt has himself candidly observed that, on his theory, it 'ought rather to have been perpetuated than abandoned' (so it *is* abandoned) 'under conditions of environment' (such as more abundant food) 'which permitted the *pirrauru* group to remain together on one spot, instead of being compelled by the exigencies of existence to separate into lesser groups having *noa* (or regular) 'marriage.' So *pirrauru* don't live in 'groups'!"

The reference given *J.A.I.*, xiii, p. 34, is not correct, and should be *J.A.I.*, xviii, p. 34.

The parts of the above quotation in brackets are Mr. Lang's interjections. Those in quotation marks belong to a pioneer work of mine dated 1888, which is superseded by my work of 1904. The term *noa* marriage was used at that time for what I now speak of as *tippa-malku* marriage, and arose out of imperfect information given by Mr. S. Gason.

The above extracts are taken from a passage which does not refer to the Dieri, as Mr. Lang represents it to do, by the manner of his misquotation.

The whole passage which I wrote in 1888 received full consideration in 1904, and it was left in its original position, being an evidence of the direction in which my work was tending at that time, to the final conclusions which I reached sixteen years afterwards, in my *Native Tribes of South-East Australia.* Again, I feel surprised that Mr. Lang should prefer to quote an opinion held in 1888 in preference to opinions of 1904. But I also feel regret that Mr. Lang should misrepresent my meaning in this matter, and the more so that it has an unpleasant resemblance to the somewhat similar action at page 197 of his *Secret of the Totem.*

Although in this chapter Mr. Lang used all the means at his disposal to show that no such thing as *pirrauru* marriage exists except as a "sport," he has not, so far as I can see, said distinctly what his theory of primitive marriage is. But in one passage at p. 42 he says, "The law invaded by the Urabunna *piraungaru* custom is not the tribal law of incest, nor the modern law of incest, but the law of the sanctity of individual marriage."

If I am right in my inference from the general tenor of Mr. Lang's argument against *pirrauru* marriage, and especially from the passage just quoted, his theory may be that from pristine times, there has been individual marriage handed down till now in those Australian tribes which practice it. If I am in error in this inference I am open to correction.

In concluding my remarks on Chapter III, there is one matter which may be mentioned here. Although not of much importance, it is one of a number of examples of want of care by Mr. Lang, in making quotations or extracts, which will prevent me in future from accepting any in his works, without proving their correctness by referring to the original passage.

In a number of places Mr. Lang uses the term "horde," for instance, "promiscuous incestuous horde" (p. 32), "communal horde" (p. 35), "promiscuous horde" (p. 59), "horde's man" (p. 59).

There would not have been anything to remark, had Mr. Lang used these terms as his own, but they appear, from the context, to be intended, either as quotations from me or to be contemptuous expressions applied to a term I have used.

I was not able to remember where I first observed that Mr. Lang used the word "horde," until I recollected the following passage in *Social Origins,* p. 204, "Messrs. Fison and Howitt start from the horde or tribe, the horde meaning the largest local Australian community, composed of sub-tribes. . . ."

The term "horde" was never used in that sense by either Dr. Fison or me. It was first adopted in *The Deme and the Horde,*[1] afterwards in *The Dieri and Kindred Tribes,*[2] and finally defined by me in my *Native Tribes of South-East Australia,*[3] as "the primary geographical division of a tribe having female descent."

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[1] *Journ. Anth. Inst.*, vol. xiv, pp. 143–4.

[2] *Ibid.*, vol. xx, p. 35.

[3] *Native Tribes of South-East Australia*, p. 44.

Mr. Lang has noted something in a footnote at p. 101 which requires explanation, and as to which he says: "We hear on the evidence of 'Wonghi informants' that members of the totem are allowed to change totems, 'to meet marriage difficulties,' and because in different parts of the tribal territory different animals, which act as totems, are scarce. . . ."

The passage in question is not clear and has misled Mr. Lang. It is not the totem animals which are scarce, but about Mosgiel the people of the opossum totem are almost extinct, while in other parts of the Wonghibon country, its members are numerous, and those of the emu and mallee-hen totems are scarce. What the passage means is that the totemic marriages are so arranged that the children shall be of some totem, the members of which are few in number.

The table of Wonghibon marriages and descents at pp. 214–215 gives the marriages to which the Wonghibon informant referred, and the following diagrams will show how the arrangement works out.

Regular marriages.	*Anomalous marriages.*
Murri-kangaroo	Murri-black-duck
Butha-opossum	Ipatha-opossum
|	|
Ipai-opossum (*willi*).	Kumbo-opossum (*willi*).

The word "bearer" is misleading. What the native informant had in his mind was, that the son of the regular marriage is Ipai-*willi*, but with the anomalous marriage the son is Kumbo-*willi*.

The number of anomalous marriages which are provided for by the Wonghibon rules (*Native Tribes of South-East Australia*, pp. 214–215), shows that this tribe was on the way to extinction. This arrangement has the effect of providing for an increase in the number of people of a certain sub-class and totem.

One of the reasons why I collected comparatively little information during the last twenty years, on native custom in South-East Australia, was because I found that the rapid extinction of the tribes, in contact with our civilisation, had in a great measure broken up their old social organisation.

Since the publication of my work, however, I have made some further investigations as to the effect produced upon native custom by the dying out of the tribes. This matter is of very great moment to anthropology, for, unless an inquirer take note of the altered conditions under which the remnants of tribes are living, he will, should he be careless or unwary, inevitably report the new rules of marriage as part of the original social organisation of the tribe. Under such circumstances his statements will conflict with those of earlier investigators who based their views upon the rules which obtained when the tribes-people lived a savage life.

The results of my investigations into this important question will be made known in due course. Meanwhile, may I suggest that anthropologists will do well to receive with caution the kind of statement to which I refer.

AUSTRALIAN GROUP-RELATIONSHIPS.

By A. W. Howitt, C.M.G., Sc.D.

Mr. Andrew Lang remarks at p. 55 of *The Secret of the Totem*, "if *pirrauru* were primitive, it might be looked for among these southern and eastern tribes . . . but in these primitive south-east tribes *pirrauru* is no more found than subincision. . . ."

I do not understand what Mr. Lang means by "primitive tribes," because those of the south-east who have not got *pirrauru* are, according to my classification, advanced, in so far that they have individual marriage.

I now propose to show what I take to be good reasons for the belief that those tribes did at one time have a marriage of the type of the *pirrauru* of the Dieri, and if so, it is an answer to Mr. Lang's objection.

The *noa* relationship is the starting point of my explanations, and to make them as clear as possible to my readers, I shall, in the first place, enumerate the several ways in which the potential claim of a Dieri man to one or more of his *noas*, is rendered valid.

This may be by:—

(*a*) Betrothal (*Native Tribes of South-East Australia*, pp. 177–8).
(*b*) Gift of the woman (pp. 178–9).
(*c*) The *kandri* ceremony (pp. 181–2); the performance of which may be in consequence of;
(*d*) An agreement between two brothers to become the *pirraurus* of their respective wives. In such a case they commonly lived together in a group marriage of four (p. 181).
(*e*) Consent of the husband (p. 181).
(*f*) A man receiving the wife of his deceased brother (p. 181).
(*g*) Allocation by the elders (p. 182).

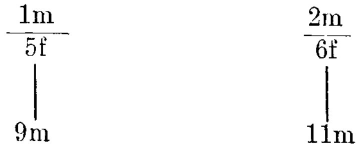
Under all these new marital conditions, the man and the woman remain *noa* to each other.

I have always found a difficulty in explaining the system of Dieri *pirrauru* marriage to those who have no actual knowledge of the conditions. In my earlier works I endeavoured to meet it by speaking of the unions under (*a*) and (*b*) as *noa* marriages, but I abandoned this, because it was rather indefinite, in so far that all the unions are *noa* marriages. In my *Native Tribes of South-East Australia* I endeavoured to avoid this by using the term *tippa-malku* for all the marriages under (*a*) and (*b*), but as this term properly applies to betrothal, it is likely to cause misapprehension, by also including the gift of a woman, under the circumstances stated in my work (pp. 178–9).

I therefore suggest the term *specialised-noa* for the cases under (*a*) and (*b*), and *pirrauru-noa* for those under (*c*).

A diagram will be useful, and for it I extract certain particulars from the "Table of Dieri Marriages and Descents" which faces page 150 of my *Native Tribes of South-East Australia.* As I explained in that work, the individuals shown in the table, are not supposititious, but represent real persons, so that the relationships attaching to them are facts and not mere inferences.

Diagram.



The men 1 and 2 were brothers of the *kararu* class and the women 5 and 6 were sisters of the *matteri* class. The two men and the two women were of course *noa* to each other. The son of 1 and 5 is 9, and of 2 and 6 is 11.

Both 1 and 2 obtained their wives by betrothal, and therefore the relation of *noa* was "specialised," in the sense in which I use that term. As I have already said it was a common practice with the Dieri for two brothers, who had married two sisters, to live together in a group-marriage of four (*op. cit.*, p. 181), that is as *piarrurus*, and, taking it to be the case in this instance, the arrangement was effected by the *kandri* ceremony.

Two definitions may be made now. The term "wife" includes a woman who has been allotted to a man under (*a*) (*b*) or (*c*); "husband," any man to whom a woman has so been allotted. I use the terms in the sense in which I now define them and not in our restricted connotation.

The first terms to be considered are husband, husband's brother, and (*f*)[1] sister's husband. Now, bearing these preliminary statements in view and commencing with 5, the man 1 is her husband, but 2 is also her husband, as well as being the husband of her sister 6. Thus we may see that the term husband also includes husband's brother, and (*f*) sister's husband.

The next terms are wife, wife's sister and (*m*) brother's wife. The woman 5 is the wife of 1, but 6 is also his wife, therefore we have here the two first terms. The woman 6 is the "wife's sister," but also (*m*) the brother's wife.

The terms father, father's brother, mother's sister's husband, also mother, mother's sister, father's brother's wife may be considered next, because they necessarily follow the marital terms.

The men 1 and 2 are group husbands of the women 5 and 6. The man 1 is the father of 9, but his brother 2 is equally the father of 9, because he is also the husband of 5, the mother of 9. The same is also the case with 1 and 2 as regards 11.

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[1] (*m*) means male speaking, and (*f*) means female speaking.

We can see from this that the term father also includes father's brother and mother's sister's husband.

The woman 5 is the mother of 9, but her sister 6, being the wife of 1 the father of 9, is therefore in the relation of mother to 9, her sister's son. The same line of argument applies to 6 the mother of 11.

We may therefore see why it is that the classificatory system of relationship includes under the same term, mother, mother's sister, and father's brother's wife.

No one says or thinks in the Dieri tribe that, as Mr. Lang puts it (*op. cit.*, p. 46), she, the woman 6, "collaborated in giving birth to him," the man 9, any more than we should do so, as to a stepmother. The position of 6 as to her sister's children, follows from her position as the wife of her sister's husband. The Dieri no more thinks, when he applies the term *ngandri* (mother) to two women, that they have collaborated in the birth, than we do when we apply the term "grandmother" to two separate women, that they have collaborated in the birth of any one individual.

The term *ngandri* as applied to both 5 and 6, carries with it a strong feeling of kinship, which may be estimated from my remark (*op. cit*, p. 184) that "in the event of a *tippa-malku* wife dying, a *pirrauru* wife will take care of her children and attend to them with affection."

The filial terms to be considered are (*m*) son, brother's son, wife's sister's son, and (*f*), son, sister's son and husband's brother's son.

The man 9 is the son of 1, and 11 of 2, but 9 is also the son of 2, therefore the term son also includes (*m*) brother's son, and as 9 is son of the sister of 6, the wife of 2, this term also includes (*m*) wife's sister's son.

Taking 5 as the example of (*f*) son, sister's son, and husband's brother's son, the same line of argument will show that those relationships, as we reckon them, are all included in the one term "son."

There are, in the Dieri language, three fraternal terms, *neyi*, elder brother, *kaku*, elder sister, and *ngatata*, younger brother or sister. As one term will suffice to illustrate the interrelations of all, I shall select *neyi*.

The man 9 is the son of his joint fathers 1 and 2, so is 11, and having the same father they are brothers, one of them being the elder.[1] Similarly, as 11 is the son of his joint *ngandri* 5 and 6, who are also the mothers of 9, he and 11 are brothers. I must point out, however strange it may appear to us, that a man's younger brother may be older than himself, under the conditions I have explained.

How strong and real this fraternal bond may be, can be estimated by the case which I recorded (*op. cit.*, p. 327), where an elder brother suffered the death penalty stoically, at the hands of a *pinya*, for a blood-feud incurred by evil magic, attributed to his *ngatata* or younger brother.

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[1] It is noteworthy in this respect that in the Bingbinga tribe *pappa* includes elder brother and also father's elder brother's son, while *pappaia* includes younger brother and also father's younger brother's son.

These fraternal relationships explain why it is that in Australian tribes, the children of two or more brothers or of two or more sisters, are all brothers and sisters.

It may be as well to remind my reader that the terms of relationship, with one or two exceptions, denote a group and not an individual. Therefore the term "father" includes also his brothers, own and tribal, "mother" also includes her sister's own and tribal, and so also with the other terms.

One of those exceptions is the Dieri term *tippa-malku*, which denotes that a male and female *noa* are in the relation of betrothal, this being a reciprocal term.

There is another term, the Dieri *yimari*, which may be considered here, and which denotes "husband's brother" and "wife's sister." When the *tippa-malku* marriage was made between 2 and 6, the former became the *yimari* of 5, and 5 became the *yimari* of 2. In our system we differentiate between these relationships of "husband's brother" and "wife's sister," calling them for distinction "brother-in-law" and "sister-in-law." But the Dieri make no distinction, because the term *yimari* is necessarily reciprocal. An inspection of the diagram shows that 1 is the "husband's brother" of 6, while 6 is the "wife's sister" of 1. This term must have arisen out of, and also denotes, the reciprocal relation in question.

The next step is to compare the terms of relationship used by the other tribes, with those of the Dieri.

An inspection of the tables will show that some tribes have one word which may be likened to our "spouse," and which includes all the marital terms, for instance, the Dieri *noa*, the Urabunna *nupa*, the Kurnandaburi *abaija*, the Arunta *unawa*, and the Watu-Watu *nopui*. Other tribes have two names, one being male and the other female, corresponding to our "husband" and "wife," such as the Kurnai *bra* and *maian*.

For comparison with the Dieri terms I shall take the Kurnai, because, although those of any of the other tribes would have done as well, the Kurnai is one of those which have made the greatest advance socially, and is, therefore, in marked contrast to the former.

The Kurnai tribe is not, like the Dieri, divided into two exogamous intermarrying classes, with female descent, but into numerous local groups which are exogamous and intermarrying under a definite local arrangement (*op. cit.*, pp. 76, 272), descent being in the male line.

The former diagram, with certain provisos, will serve to illustrate the marriage rule and relationship terms of the Kurnai, as well as those of the Dieri.

I assume that the men 1 and 2 are brothers belonging to a certain local group, which may be called "x," and that the women 5 and 6 are sisters, belonging to another local group "y." The two groups are exogamous and intermarry. I further assume that, as was a common practice with the Kurnai, the two men

1 and 2 agreed to elope at the same time with the women 5 and 6; having done so 1 became the husband of 5 and 2 of 6, 9 being the son of 1 and 5, and 11 of 2 and 6.

There is individual marriage in the Kurnai tribe, and 1 is the individual husband (*bra*) of 5, yet 2, the brother of 1, is also the *bra* of 5, although there are no marital relations between them. The man 2 is the (*f*) sister's husband of 5. Similarly, it may be seen that the term *maian* (wife), includes also "wife's sister," and (*m*) "brother's wife."

The parental term *mungan* (father) is applied by 9 to 1, the individual husband of his mother 5, but it is also applied by him to 2 his father's brother, between whom and 5 there are no actual marital relations. Moreover, it also includes "mother's sister's husband," that is the man 2.

The term *yukan* (mother) is applied by 9 to his mother 5, and also to her sister 6, the titular wife of his father.

The filial term *lit* (child) is applied by 1 to 9, by 2 his titular father, by 5 his actual mother, by 6 his titular mother, and they follow correctly the premises of the parental terms.

The term *thundung* (elder brother) is taken as an example of all the fraternal terms. Assuming that the man 1 is the elder, then 9 is the elder brother of 11, they having the same fathers, the men 1 and 2, and also because 5 and 6 are their mothers, own and titular.

I think that anyone who approaches this subject with an open mind and free from bias, will agree with me that the marital, parental, filial and fraternal terms of relationship of the Dieri, define the conditions of *pirrauru* marriage. These terms are quite inapplicable to the conditions of those tribes which have only individual marriage, and yet make use of the equivalents of terms which denote marriage of the *pirrauru* type.

Mr. Lang says in the course of his adverse argument (*op. cit.*, p. 43) "Whatever the original sense of the names, they all now denote seniority and customary legal status in the tribe with the reciprocal duties, rights and avoidances. . . . ." In these Dieri terms we certainly have "the original sense," in so far that they exactly define the conditions to which they are applied.

Mr. Lang also takes exception to the use of our terms to explain the application of the native words for relationships. He says (*op. cit.*, p. 43) "Manifestly there lurks a fallacy in alternately using 'sons,' for example, in our sense and then in the tribal sense, which includes both fatherhood, or sonship, in sense, and also tribal status and duties." "The terms, in addition to their usual and generally accepted signification of relationship by blood, express a class or group relation quite independent of it." The reference for this quotation is given in a footnote as Roth, *N.W.C. Queensland Aborigines*, p. 56.

Would Mr. Lang prefer that I should endeavour to explain to him the relationship of "son" by using only the Dieri words?

For instance! "In this case the *ngatani* and the *ngatani-waka* are both in the same relation to their *ngatamura*, yet the *ngatani-waka* is not so near in the relationship as is his *neyi* the *ngatani*. This is because, although both are *neyi*, and *ngatata*, they are *murdu-mara* and not *buyulu-mara* to each other, etc."

Perhaps on further consideration Mr. Lang may prefer my usual method of explanation, and also think it advisable to master the theory and practice of native relationships.

In these matters we are now down to bedrock, on the firm foundation of fact and not upon an insecure stratum of guesswork.

Hitherto a student of the classificatory system, working at first hand among savage tribes, or in the study, with information at second hand, supplied by others, has been obliged to rely upon inferences drawn from the terms of relationship alone. But fortunately many tribes in Australia, over an area larger than Great Britain and Ireland, have, or had before we occupied their country, a system of marriage which supplies that evidence of fact, which up to the present time, has been wanting. Group-marriage, that is *pirrauru*, is a fact, and the terms of relationship define it, as our terms define our individual marriage and the family created by it.

But even if Mr. Lang were correct in speaking of the *pirrauru*-marriage as a "sport," it would not alter the fact, that the relationships, brought about by what he admits is a recognised union (*op. cit.*, pp. 52, 53), are those which the terms define. Moreover there are no others, even as vestigiary survivals, to point to any earlier period of individual marriage.

On examining the table of marital terms at the end of this paper, it will be seen that they may be arranged in two groups, one with a single term for all the relationships, the other with one term for husband and another for wife, as I use those words.

The first includes the Dieri, Urabunna and Kurnandaburi who have group-marriage, and the Narrinyeri, Arunta, and Wathi-Wathi who have not. The second includes all the other tribes, who have individual marriage.

The Wathi-Wathi belong to a group of nations, whose north-western tribes are adjacent to the Dieri and Yantruwunta. It is significant that the Wathi-Wathi, who advanced from group-marriage to individual marriage, should retain a marital term *nopui*, which is as apparently the same as the Dieri *noa* and the Urabunna *nupa*.

In summarising the conclusions which may be drawn from the facts stated, the principal point is that the original terms of relationship, such as *noa*, indicate marriage on a wide scale, although restricted to a definite part of a tribe. We may conclude that there was previously a still wider range, which the *noa* relationship restricted. A further limitation then comes in by which only some of those who are *noa* to each other are married by the *kandri* ceremony.

By *pirrauru* also some of a man's brothers become actually the co-husbands of his wife or wives. A larger number are only nominally so, and this may be considered as a vestigiary survival of what was a reality before the institution of the *kandri* ceremony selected, so to say, only some of the *noa* brothers.

Later on with possible association of change of descent from the female to the male line, the *pirrauru* system was abandoned, the marital rights, formerly exercised by the *pirrauru*, being now seen at the time when the woman is actually handed over to one certain man.[1]

The handing over of a woman and the exercise of the former marital rights, is what I have spoken of as the *jus primæ noctis*, which Mr. Lang disputes.

In the Kurnai tribe it is the fraternal group who exercise the right, that is, those who are the own or tribal brothers of the future husband and belong to his locality, any one of whom might have eloped with the woman if she had consented to accept him as her *bra*. The fraternal group, having exercised the right, has thereafter no further claim over the woman, who becomes the individual *maian* of the man with whom she eloped.

This is not a solitary instance of the practice, and the Kuinmurbura are a good example. In that tribe it was the men who were in the relation of *durki* to the woman, who had access to her, and the relation of *durki* is the equivalent of *noa*.

This tribe has advanced to about the same point of social development as the Kamilaroi, having individual marriage and an analogous class organisation, yet it seems as if, in this practice, an old inborn right had been revived.

If we go further back, in the line of advance, to the Kurnandaburi, who have group-marriage, as well as the equivalent of the Dieri *tippa-malku*, the same facts meet us. It is the fraternal group of men who exercise a temporary right over the woman, all being *abaija* to her, which is, on the one side, the equivalent of the Dieri *noa* and on the other of the Kuinmurbura *durki*.

I think we may see in these cases a change in the direction of individual marriage in the Kurnandaburi, and a survival of ancient custom in the Kuinmurbura and the Kurnai.

To this may be added that the Dieri betrothal was an encroachment upon *pirrauru*.

The practice of betrothal and that of giving a woman to a certain man, who had rendered some signal service to the kindred, for instance, by preventing blood revenge, or by holding the body at the burial ceremony, must have tended towards a feeling of proprietary right in the man over the woman so given. The practices of betrothal and gift are therefore early stages in the social advance, and must be taken into account in considering the general advance in Australian tribes.

The accompanying table shows my evidence as to betrothal, and although not so complete as I could wish, certain conclusions may be drawn from it.

Taking the Dieri as the starting point, the advance has been from the power of the mother and her brothers to dispose of her daughter, to that of the mother and father; then to the father and in some cases to his eldest brother. These social changes have, speaking broadly, led to the establishment of individual marriage, descent in the male line and an organisation, in some tribes, upon locality alone.

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[1] This summary was suggested to me by Professor Baldwin Spencer.

It must be added, that no two tribes are at the same level in the advance, but that one has reached a certain point, while another is either behind or beyond it. It is evident, therefore, that neither the primitive nor the advanced position of any tribe can be determined unless all the factors are considered. It is only justifiable to restrict the investigation, where it is intended to determine whether a tribe is or is not advanced further than another, for instance, as to marriage, ceremonies, or beliefs.

When writing my *Native Tribes of South-East Australia* I considered the possibility of the system of *pirrauru* having resulted from the development of an advance from an earlier form of promiscuity. But it has always been a principle of investigation with me, to base any conclusions, if possible, upon some evidence, and not to frame a hypothesis upon conjecture, as to what the conditions of ancient society may have been.

In that feeling I wrote the passage which commences Chapter III (pp. 173, 174) of my *Native Tribes of South-East Australia*, in which I guarded myself from being thought, necessarily, to imply complete and continuous communism between the sexes.

This was an amended form of a similar passage, which I wrote in the year 1883 and which contains the same guarded expression.[1] Mr. Lang quotes (*op. cit.*, p. 60) this pioneer work in preference to the later expression of opinion, and does not notice, so far as I have seen, the guarded expression in either of those works.

The examination of Mr. Lang's criticisms, led me to a further examination of all the evidence I have, bearing on the terms of relationship, of the tribes of South-East Australia, most of which was collected during my earlier investigations. Thus I came to the important conclusion, that they afforded direct evidence of the former existence of group-marriage in those tribes which have now only individual marriage. Moreover, that their terms of relationship are identical in application to the same individuals with those of the Dieri, and consequently a wider inference is justified, than I had thought possible.

Messrs. Spencer and Gillen have come to the same conclusion by a comparative study of the terms used by the Central and Northern tribes. Therefore, speaking broadly, the terms of relationship used by the tribes of the Eastern half of Australia, point to this conclusion. The same argument may be reasonably extended to the whole of the continent.

The question then suggests itself, what may have been the origin of the *pirrauru* marriage of the Dieri? We find a starting point, in this inquiry, in the two exogamous classes, whose action prevents the marriage of brother and sister. The next step onwards is their division into four sub-classes, thereby possibly preventing the marriage of parent with child, followed, in the northern central tribes, by a further division into eight sub-classes.

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[1] *Journ. Anthrop. Inst.*, vol. xii, 1883.

It is an accepted fact, that the numerous restrictions of marriage, in the Australian tribes, have been intentionally made, to prevent the union of those who are considered to be of "too near flesh." I must point out here that there is no evidence whatever that the Australian tribes have any knowledge of any injurious effect produced by interbreeding.

If we reverse the method, and trace back the successive changes, we shall find that the division into eight sub-classes is still proceeding in the southern Arunta. There are apparently only four sub-classes, Panunga, Bulthara, Purula and Kumara, but further inquiry reveals the fact that, for instance, a Panunga man is not allowed to marry any and every Purula woman. The latter are all divided into two groups, the members of one of which he may marry, whereas the others are strictly forbidden to him.[1] The divisions are there, but have not yet received names.

We may conceive the original segmentation to have been thought about, not by revolutionary, but evolutionary means, within the Undivided Commune.

I picture the two segments as having group-marriage, controlled by a prohibition of brother and sister marriage, and the unsegmented whole with group-marriage, including that of brother and sister.

Looking backwards into the unknown depths of time, far beyond the conditions just postulated, we may suspect a period of general promiscuity between the sexes, and not that "sanctity of individual marriage," which, if I am not in error, is Mr. Lang's theory.

MARITAL TERMS.

Tribes.	Husband.	Husband's brother.	(F) Sister's husband.	Wife.	Wife's sister.	(M) Brother's wife.
Dieri	*noa*	*noa*	*noa*	*noa*	*noa*	*noa.*
Urabunna	*nupa*	*nupa*	*nupa*	*nupa*	*nupa*	*nupa.*
Kurnandaburi	*abaija*	*abaija*	*abaija*	*abaija*	*abaija*	*abaija.*
Watu-Watu	*nopui*	*nopui*	*nopui*	*nopui*	*nopui*	*nopui.*
Wotjobaluk	*nanitch*	*nanitch*	*nanitch*	*matjun*	*matjun*	*matjun.*
Wurunjeri	*nangurung*	*nangurung*	*nangurung*	*bimbang*	*bimbang*	*bimbang.*
Kurnai	*bra*	*bra*	*bra*	*maian*	*maian*	*maian.*
Yuin	*tarrama*	*tarrama*	*tarrama*	*nadjanduri*	*nadjanduri*	*nadjanduri.*
Narranyeri	*napi*	...	*ngau-wiruli*	*napi*	...	...
Chepara	*nubunping*	*nubunping*	*numugeri*	*nubunpingun*	*nubunpingun*	*innamarinkun.*
Kamilaroi (Northern)	*golid*	*golid*	*golid*	*ungina*	*ungina*	*ungina.*
Kuinmurbura	*nupa*	*nupa*	*nupa*	*gingil*	*gingil*	*gingil.*
Kaiabara	*malaume*	*malaume*	*malaume*	*malemungan*	*malemungan*	*malemungan.*
Arunta	*unawa*	*unawa*	*unawa*	*unawa*	*unawa*	*unawa.*
Binbinga	*kaikai*	*kaikai*	*kaikai*	*karina*	*karina*	*karina.*

NOTE.—In the Narranyeri and Chepara tribes, the third term of the former, and the third and sixth of the latter suggest changes in terms, or the retention of a term analogous to the Dieri *Yunari.*

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[1] Messrs. Spencer and Gillen, *The Northern Tribes*, p. 97.

Parental.

Tribe.	Father.	Father's brother.	Mother's sister's husband.	Mother.	Mother's sister.	Father's brother's wife.
Dieri	*ngaperi*	*ngaperi*	*ngaperi*	*ngandri*	*ngandri*	*ngandri.*
Urabunna	*nia*	*nia*	*nia*	*luka*	*luka*	*luka.*
Kurnandaburi	*urninu*	....	....	*kamundi*	*kamundi*	*kamundi.*
Watu-Watu	*mamui*	*mamui*	*mamui*	*gunui*	*gunui*	*gunui.*
Wotjobaluk	*maam*	*maam*	*maam*	*bap*	*bap*	*bap.*
Wurunjeri	*mamen*	*mamen*	*mamen*	*babun*	*babun*	*babun.*
Kurnai	*mungan*	*mungan*	*mungan*	*yukan*	*yukan*	*yukan.*
Yuin	*banga*	*nadjung*	*kaung*	*mamung*	*mamung*	*mamung.*
Narrinyeri	*nanghai*	*nanghai*	*nanghai*	*nainkana*	*nainkana*	*nainkana.*
Chepara	*bing*	*bing*	*kuming*	*buyung*	*buyung*	*tuyung.*
Kamilaroi	....	....	....	*umbathi*	*umbathi*	*umbathi.*
Kuinmurbura	*bena*	*bena*	*bena*	*aia*	*aia*	*aia.*
Kaiabara	*baboin*	*baboin*	*baboin*	*avang*	*avang*	*avang.*
Arunta	*oknia*	*oknia*	*oknia*	*mia*	*mia*	*mia.*
Binbinga	*kuni*	*kuni*	*kuni*	*kutjina*	*kutjina*	*kutjina.*

Note.—The three first terms of the Yuin suggest changes in nomenclature in this advanced tribe. In the Chepara the third and sixth terms follow apparently those in the Marital Table.

Filial Terms.

Tribe.	(M) Son.	(M) Brother's son.	(M) Wife's sister's son.	(F) Son.	(F) Sister's son.	(F) Husband's brother's son.
Dieri	*ngatamura*	*ngatamura*	*ngatamura*	*ngatani*	*ngatani*	*ngatani.*
Urabunna	*biaka*	*biaka*	*biaka*	...	....	....
Kurnandaburi	.	....	....	*worua*	*worua*	....
Watu-Watu	*maipui*	*maipui*	*maipui*	*waipui*	*waipui*	...
Wotjobaluk	*ngaluk*	*ngaluk*	*ngaluk*	*nunungyep.*	*nunnungyep*	*nunnungyep.*
Wurunjeri	*mumum*	*mumum*	*mumum*	*wurungin*	*wurungin*	....
Kurnai	*lit*	*lit*	*lit*	*lit*	*lit*	*lit.*
Yuin	*wurum*	*wurum*	*wurum*	*wurum*	*wurum*	*wurum.*
Narrinyeri	*porlean*	*porlean*	*porlean*	*porlean*	*porlean*	*porlean.*
Chepara	*naring*	*naring*	*naring*	*naring*	*naring*	*naring.*
Kuinmurbura	*manbon*	*manbon*	*manbon*	*nugin*	*nugin*	....
Kaiabara	*nogoin*	*nogoin*	....	*nogoin*	*nogoin*	...
Arunta	*allira*	*allira*	*allira*	*umba*	*umba*	*umba.*
Binbinga[1]	*katja-katja*	*katja-katja*	*katja-katja*	...	....	....

Fraternal Terms.

Tribes.	Brother.	Father's brother's son.	Mother's sister's son.
Dieri	*neyi*	*neyi*	*neyi.*
Urabunna	*nuthi*	*nuthi*	*nuthi.*
Kurnandaburi	*kokundi*	*kokundi*	....
Watu-Watu	*wawi*	*wawi*	*wawi.*
Wotjobaluk	*wau*	*wau*	*wau.*
Wurunjeri	*bangan*	*bangan*	*bangan.*
Kurnai	*thundung*	*thundung*	*thundung.*
Yuin	*dadung*	*dadung*	*dudung.*
Narrinyeri	*gelanaui*	*gelanaui*	*gelanaui.*
Chepara	*nabong*	*nabong*	*nabong.*
Kamilaroi (Northern)	*tiathi*	....	....
Kuinmurbura	*murang*	*murang*	*murang.*
Kaiabara	*nuni*	*nuni*	....
Arunta	*okilia*	*okilia*	*okilia.*
Binbinga	*pappa*	*pappa*	*pappa.*

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[1] I believe, but I am not quite certain, that the Binbinga term in the three last columns is also *katja-katja*.

BETROTHAL IN THE TRIBES OF SOUTH-EAST AUSTRALIA.

Tribe.	Descent.	Marriage.	Betrothal.	Locality.
Dieri	female	group	by mother and her brothers	Lake Eyre.
Kurnandaburi	female	group	father and mother	Barcoo River.
Wathi-Wathi	female	individual	mother and her brothers	Murray River.
Wotjobaluk	female	individual	father and eldest son	North-west Victoria.
Mukjarawaint	female	individual	father and eldest son with parental grandparents.	North-west Victoria.
Peekwurong	female	individual	father	South-west Victoria.
Theddora	female	individual	father	East Victoria.
Ngarigo	female	individual	father	South of New South Wales.
Wolgai	female	individual	father and mother	New South Wales.
Wollaroi	female	individual	mother	New South Wales.
Wakelbura	female	individual	mother	Belyando River.
Wiradjuri	female	individual	father	North of the Murray River.
Kuinmurbura	female	individual	father	Broad Sound Queensland.
Yerkla-mining	male	individual	father and elder brother	Eucla.
Narrinyeri	male	individual	elder brother of woman[1]	Mouth of River Murray.
Yuin	male	individual	father	South Coast of New South Wales.
Chepara	male	individual	father and mother mother's brother.	South Queensland.

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[1] Neither the Kamilaroi nor the Kurnai have betrothal. Also the father at times.

THE ABORIGINES OF SUNGEI UJONG.[1]

By F. W. Knocker, Curator, Perak State Museum.

[With Plates XXV, XXVI.]

As far as I can ascertain, little of an anthropological value has yet been written of the aboriginal races inhabiting the hills of Sungei Ujong. This is perhaps surprising, as the haunts and camping grounds of these tribes are easily accessible; and, indeed, the people are fairly well known to a good many Europeans. The information imparted in this paper, however, concerns more directly those tribes living in the hills which form the north and north-west boundaries of Sungei Ujong. The Balau Hills, which constitute the northern boundary, are the home of the greater number. To the north-west the camps have been considerably broken up by the approach of the railway; and other circumstances accompanying the advance of civilization have helped to scatter the people. A glance at the accompanying sketch map of the old State of Sungei Ujong will give a very fair idea of the geographical range of the wild tribes about to be described. It might, perhaps, be as well to mention here that the State of Sungei Ujong has now been merged into the newer state of Negri Sembilan; but the name is still in use for describing the combined districts of Seremban and the Coast.

The aborigines of Sungei Ujong are popularly known by the name of *Orang Bukit,* the same name under which certain people in Selangor have been described by Messrs. Annandale and Robinson (vide *Fasciculi Malayenses,* Anthropology, part 1, pp. 48–57). By many of the Malays living in close contact with them they are also called *Orang Raiat,* the term commonly used for landowners. Occasionally I have heard them refer to themselves as *Sakai*; but on being cross-questioned they admitted using the term simply because people persist in calling them by it. They deny positively that they are Sakai or of Sakai origin. They assert that the Sakai is a race of people, small of stature, much smaller than they themselves, living principally at Ulu Pahang and other remote parts of the Peninsula. Further, they say that the Sakai are covered with hair like the beasts of the forest; and that on meeting their own people they are afraid and run away. They have also a legend in respect to the Sakai which tells how the parents plant a *parang* in the fore-arm of the young, both male and female, projecting a few inches beyond the elbow. The flesh grows round it and it eventually becomes part of the fore-limb. In after life this limb weapon is used to clear the jungle, and not for hostile purposes.

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[1] Sungei Ujong, formerly an independent British Protected State, is now one of the original nine States which constitute the entire State of Negri Sembilan (*Negri*=country; *Sembilan*=nine) and which, together with Perak, Selangor and Pahang, form the British Protectorate of the Federated Malay States.

There are apparently two distinct races of aborigines in Sungei Ujong—*Orang Berlanus*[1] or *Mentra,*[2] and *Orang Bersisi.*[3] This paper concerns principally the former; but the two races resemble one another closely, and in some parts of the State they interbreed. The principal distinction seems to be the dialect, the *Orang Bersisi* having one of their own, whilst the *Orang Berlanus* adopt the Malay language, slightly modified in accent, and with an inflection entirely different to that of the Malays. Out of a list of some three hundred words I was only able to detect the few given in Appendix II as differing entirely from the Malay dialect. These, curiously enough, do not at all resemble the corresponding words in the Bersisi dialect, whilst many of the Bersisi words are identical with words collected from the wild tribes living at the Ulu Plus in Perak. Neither of these races can go back further in their past history than the days when they were hunted and persecuted by the Malays, which lasted until the British Protectorate was established in the State. They suffered severely, in common with the Malays of Sungei Ujong, at the hands of a powerful and warlike race of Malays concentrated at Kajang in Selangor, and known as the *Orang Rawa.* These people constantly raided both the Malays and aborigines of Sungei Ujong, killing the men and seizing the women and children. In those days many members of the tribes living on the Balau Hills fled into Malacca; some of them have since returned and brought back

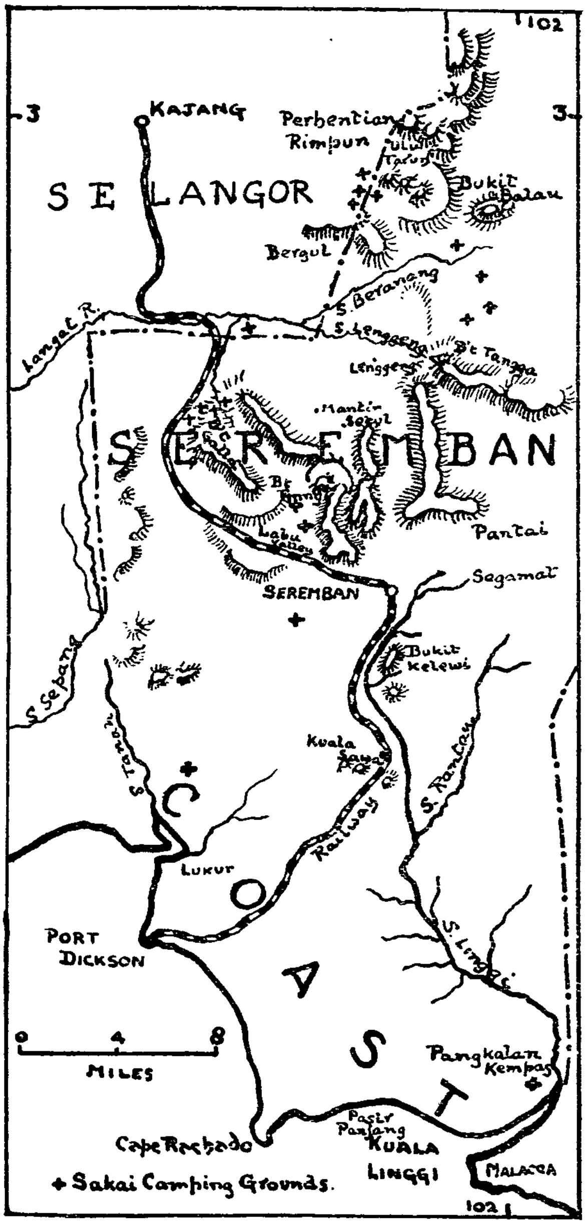

FIG. 1.—SKETCH MAP OF SUNGEI UJONG.

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[1] *Bělanas* or *Blandas.*

[2] *Mantra* or *Mĕntĕra.*

[3] *Bĕsisi.*

with them friends made whilst living in that territory, but likewise *Orang Berlanus.* Living amongst the Balau and Beranang people, also, are men and women from the adjoining district of Jelebu and from the State of Pahang, all claiming to be *Orang Berlanus* or *Mentra.* These Pahang people talk of another race in that country called the *Orang Sentong,* with whom, as also with the *Orang Bersisi,* they positively assert they do not mix.

In stature the aborigines of Sungei Ujong are short, but well and proportionately built. The average height of the men, taken from thirteen adults, works out at 1·562 m. (say 5 feet 1 inch), and four adult women give a mean height of 1·436 m. The limbs are stoutly made, and the breasts of the men are developed to a degree of noticeable prominence. The skin, of a reddish brown tint, is quite free from all diseases, and even in aged individuals the form does not reach that degree of emaciation characteristic of aborigines in other parts of the Peninsula. The body and fore-limbs are quite free from hair, but the lower parts of the legs are frequently covered with long wiry hair. In one instance (Batin Jalel) hair was conspicuous on the chest as well as the lower limbs, whilst, on the face, hair of a wiry texture grew abundantly. The hair on the head is black, thick, and, for about an inch from the root, straight, graduating to sharp curls at the end. Sometimes the hair on the head is cut quite short, when its appearance is straight; whilst cut to a few inches in length, it gives a wavy appearance. Occasionally they shave their heads, having a variety of ways of treating it: (*a*) shaved all over, (*b*) shaved off on the crown only, leaving a thick halo-shaped mop round the head, (*c*) shaved off at the back and sides, what is left forming a large tassel over the centre of the forehead, (*d*) shaved off at the back and on the crown to form a thick semicircular mop in front extending from ear to ear. The women dress their hair similarly to the Malay women, and never cut or shave it, but the curly nature frequently asserts itself.

The face, in the men, is angularly wedge-shaped; but in the women the sharpness of the angles is not so pronounced and can be more precisely described as rounded wedge-shaped. The cheek-bones are high and prominent, but prognathism is entirely absent. The forehead is deep, broad, and very slightly rounded. The nose is narrow and concave at the bridge, widening out below and becoming broad and flat, with nostrils inclined to appear dilated. The eyes are oval: not absolutely almond; in fact, at times (moments of delight and surprise) they are almost round. The pupil is dark brown, and, glanced at casually, might be taken for black. The mouth is large and straight, with thick prominent lips. The teeth, otherwise good, are hopelessly stained, and in old age ruined, by the habitual chewing of sirih, pinang-nut, gambier and tobacco. The children, both boys and girls, are bright and intelligent. Their skin has a lighter shade than the adults, and the body is generally of a healthy appearance. The stomach is always protuberant.

The gait of these aborigines is a short, quick step, palpably originating from the hips, which exhibit movements of great muscular force whilst in motion. Trees are climbed by catching hold of the trunk with both hands, throwing out the body and walking up it, as it were. Their powers of endurance are great.

Intellectually the Orang Bukit of Sungei Ujong is wonderfully bright. He thinks for himself and he acts for himself, and, moreover, has by far a greater conception and mental grasp of things alien to his nature than more civilized natives of his country. He has a keen sense of wit, and is quick at repartee. The love of animals is another trait deeply rooted in his nature, and every camp has its canine pets as well as domestic fowls. The dogs are slight in build, of a light tawny colour, tail carried in a drooping position and ears pointed and erect. They are very hostile towards white strangers. The men know the wild dog (*S'rigalah*) well; but on being asked to secure one, either dead or alive, they refused, on the grounds that their affection for them was too great (*banyak sayang*). To give their remark its due significance, I ought perhaps to state that during the three years I was amongst these people, this was the only request they ever refused me. On the other hand, they lavished on me unasked-for presents of plaited-grass bags and mats made by the women, fowls, eggs, Malacca canes, and fruit from their orchards.

As far as I could ascertain during my long experience and close acquaintanceship with these aborigines, they live a strictly moral life, and adultery and divorce are unknown to them. A man has but one wife at a time, though they see no objection (excepting the very natural one of being unable to provide for more) to a man having two or three wives. They have, apparently, no inclination towards crime or immorality in any form. They possess no idea of warfare or racial strife, and freely admit their preference for a life of seclusion and peace.

The Orang Bukit is born, arrives at man's estate, is married, and eventually dies, without the performance of any ceremony or rite to mark any one of the events. Marriage is merely a mutual compact entered into by the two parties concerned, and co-habitation is sufficient to acknowledge a man and woman as husband and wife. Death is treated in much the same casual way. The corpse is laid to rest on its back in a hole a few feet deep, the relatives mourning the loss for three days; but the "mourning" consists merely of voluntary confinement to the camp. In the event of two or three deaths occurring in the same camp at short intervals, the place is deserted and a fresh camping ground is selected. They have no belief in a spiritual existence in any form after death; and, in one instance, when first questioned on the subject, it seemed to strike them as rather humorous, evoking much laughter. Of ghosts, phantoms, good and evil spirits, supernatural signs or warnings, they apparently know nothing; and I have known many instances when, without the slightest hesitation, they have felled jungle, denounced by Malay and Chinese wood-cutters as haunted.

All the tribes of the *Orang Berlanus*, in Selangor, Pahang, and other parts of Negri Sembilan as well as Sungei Ujong, have their own chiefs, generally three in number. These, in order of rank, are:—*I*, Batin, *II*, Jinang, *III*, Jok'ra.[1] The

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[1] *Jukrah.*

Malay title of *Pĕnglima* is also largely in use; but as far as I could ascertain, it carried with it no authority. The Batin is the man respected by the people as their Head; but there is no actual discipline enforced, and they live untrammelled by any self-made laws or rules. The right of succession to a chieftainship passes down to the eldest male child of the late Chief's sister.

The original dress of the aborigines of Sungei Ujong was a loin-cloth made from beaten-out bark. Sarongs, pantaloons, and clothes of various descriptions, obtained by bartering with Malays and Chinese, are now worn by most of them. In the jungle, however, the loin-cloth, now made of a piece of rag, is still the favourite costume. In a few instances the long garb of the Malay-woman (*Kabaya*) is worn by the women over a sarong. The use of personal ornaments has also been copied from the Malays by many of the females; such as necklaces, brooches, ear-rings and bangles. There is an entire absence of the more primitive methods of body decorations. Nose-quills and skewers are not known to them. Tattooing and painting of the face are not practised, and necklaces of animals' teeth are never made.

The habitations of the *Orang Bukit* are of a varied character: in some cases extremely primitive, in others more advanced, Malay ideas having become blended with their own. Their original idea of a dwelling, however, appears to be little more than a shelter. The soil is first dug up and then trampled down in order to make a hard floor and to stop the vegetable growth. Around this area is constructed a hut of bark walls, covered by a roof, with sloping sides, made of interlaced palm-leaves. Inside is erected a low platform, not more than a few inches off the ground, composed either of split bamboo or of young trees lashed together with rattan. Over this plaited-grass mats are spread. This type of dwelling is still in vogue amongst the tribes living in the more remote parts of the State and not yet influenced by Malay ideas.

The food of the *Orang Berlanus* consists principally of rice and the root of the tapioca plant (*ubi kayu*). These are boiled in a small earthenware pot, procured either from a Malay or Chinaman, and afterwards eaten off a wild banana-leaf " plate." Birds, monkeys, and other animals killed with the blow-pipe are roasted by just throwing the meat on the burnt embers. On rare occasions a fowl is killed, but the eggs are eaten regularly. Water is stored in large bamboos and usually drunk with the aid of a coconut shell or a leaf "cup." They obtain fire by means of ordinary safety matches, but it does not take a very old man to remember the days when flint and steel, procured from the Malays, were used for this purpose. Parangs, forged by Chinese blacksmiths, are now universally used by the aborigines of Sungei Ujong. Obsolete guns, Tower muzzle-loaders and flint-locks can be seen in many of the camps. To use these, they extract the powder from Chinese crackers and load up with miscellaneous oddments of a sufficiently hard nature. Many of these weapons, however, are thrown out of use owing to the difficulty of procuring caps.

The blow-pipe is still the favourite weapon, and both the *Orang Berlanus* and the *Orang Bersisi* make their own. As in other parts throughout the Peninsula, it consists of an inner and outer tube. The outer tube is always in one piece, but the inner is composed of two lengths joined by a short piece of bamboo. On to the end of this pipe is fixed a trumpet-shaped mouth-piece of a soft wood. This is often coloured a bright scarlet with a "paint" produced from the berries of the *rotan jernang*, or dragon's blood (*Calamus draco*). A leaf (*dahun*) of the *palas* palm (*licuala peltata*) is often used to help fix this mouth-piece more firmly to the pipe. The outer tube is bound at both ends with small rings of plaited grass to prevent splitting of the bamboo; and, in addition, the distal extremity is always smeared over thickly with a black resin, for about seven inches. At the aperture this resin is moulded over to form a lip, and as the dart passes through this a sharp whistle is emitted from the pipe. The *Orang Bukit* says that a blow-pipe which does not give forth this whistle when blown through sharply, is practically useless; for he argues that the whistle speeds the dart and sends it straight to the object aimed at. In substance this should be true, as the narrowing of the aperture by the lip should act as a sort of choke, and without the lip the sound cannot be produced. A portion of this pipe is invariably of a brown shade. The parts left white are decorated with crude geometrical figures, which are scratched with the point of a small knife (*golok*) and afterwards coloured with charcoal. The average length of a blow-pipe is 7 feet, though they occasionally run to 8 feet and over.

The quiver is made from a large bamboo, and is ornamented with designs similar to those incised on the blow-pipe. The upper part is neatly bound with plaited rattan, leaving about half an inch bare for the cap to fit on. The latter is generally a piece of hollowed-out wood, split here and there to give it the right shape and size to fit the quiver, which is effected exactly by rattan binding. It usually takes the shape of a dome, and is hinged on to the quiver with a piece of string. There is a movable rattan binding (*simpai larat*) to which is attached the cord for fastening the quiver round the waist. At the bottom of the quiver a patch of resin is always kept for the purpose of fixing on the heads of the darts which invariably become loose. Inside, the darts are kept separately in a skeleton of small canes, the central space of which is reserved for the plugging wool. The darts average 7½ inches in length, and are made from the hard stem of a grass, fitted with a conical-shaped piece of pith. The other end is sharply pointed and rolled in the poison, being nicked immediately above in order that the tip shall break off in the wound. The poison is produced from the sap of the Upas tree (*Antiaris toxicaria*) and the leaves of a creeper. It is stored in small cane thimbles, high up inside the huts, presumably out of the reach of the children. In loading the blow-pipe the *Orang Bukit* first inserts the dart in the mouth of the pipe, and then plugs it with a small portion of the wool. In "firing" he clutches the weapon with both hands close up to the mouth, his upper lip over-laps the mouth-piece and his lower lip is tucked in below. He gives a strong, sharp puff, aiming above the object.

Throughout the country the *Orang Berlanus* make and play various musical instruments. There are two or three species of flutes. One, the *sintoh-wung*,[1] is about a foot long with five or six small holes, resembling closely the European fife. Another, the *tehbong*,[2] is not more than five inches in length, open at one end, a hole bored through the septum at the other, and a large hole in the body of the instrument to blow through. This is clutched in both hands, and, by a skilful manipulation of the tip of the thumb of the left hand over the hole at the septum end, and the lower fleshy part of the thumb of the right hand over the open end, five distinct fluty notes are obtained. A stringed instrument, called the *geranting*,[3] is made from a bamboo, 2 inches in diameter and about 15 inches long. This is provided with two, sometimes three, strings (made of finely-pared cane), passed through a hole at the bottom (septum) end, where they are held by a piece of wood, and bound round the instrument at the top end. There is a small wooden bridge, and generally three frets. The instrument has four longitudinal splits of about 10 inches, dividing it into four segments, each with a small hour-glass-shaped hole. They also make and play a Jew's harp similar to that of the Malays.

Most of the aboriginal tribes of Sungei Ujong clear a small portion of the jungle in the plains at the foot of their hillside homes, and plant *padi*. This they have learnt from the Malays, so that their methods of growing and reaping the crop are identical with those of the Malay. Hill *padi* is also grown in some parts, and Indian corn more frequently. They all cultivate the tapioca plant, the root of which is their favourite food. The people living in the valley of the Labu, and some at Batang Benar, have well-kept settlements with 40-year-old coconut and pinang palms, which would indicate their abandonment of the nomadic existence peculiar to these people throughout the Peninsula. There are also banana palms, sugar-cane, jack-fruit trees and gourds. The people at Kuala Linggi, who are *Orang Berlanus*, were making an effort three years ago to grow the nipah palm. The aborigines of Sungei Ujong are allowed by Government to make all these clearings and cultivate rent free. They also have orchards, which consist of durian, mangosteen, langsat, rambutan, and other jungle fruit-trees, which they hold free of charge, or in some cases pay a nominal rent of 25 cents per annum. In the event of the land containing these being requisitioned for mining, they receive compensation from the miner.

At the source of the Broga[4] river in the Balau Hills, the men there carried on for some time a small water-course tin mine, which they worked erratically by primitive methods. The ore washed out was sold or bartered in Broga village; but their nomadic habit prevailing caused the spot to be abandoned. Other sources for bartering are derived from jungle produce, largely in demand by the more civilized native races inhabiting Sungei Ujong; *e.g.*, rattan, bark, wild honey and jungle fruits. They will also barter or sell their labour by felling jungle for the miners and planters.

The *Orang Berlanus* counts, *i.e.*, what little counting he has to do, as he speaks, in Malay. He has very little retentiveness for figures, and as far as time is concerned cannot reckon beyond the day after to-morrow. I was fortunate enough once to secure a stick which had been used as a tally for a number of fruit trees for which compensation had to be paid. This has already been described in the *Journal of the Federated Malay States Museum*, vol. i, No. 2, pp. 60 and 61, Pl. V.

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[1] *Sĕntuwang=tuwang-tuwang.*

[2] *Tĕbong*=mouthpiece.

[3] *Kĕranting.*

[4] *Bergul.*

APPENDIX I.

A SHORT VOCABULARY OF THE BERSISI [BĔSISI] DIALECT.[1]

Human Beings.

Child ...	... *Gunun.* [*Kĕnun* or *Kĕnon.*]
Father ...	... *Ikun.*
Husband ...	... *Umal.* [*cf. Rĕmol, Amul*, etc.]
Man	... *Mat umal.* [*Ma' umal ?*]

Man, old ...	... *Kundut.*
„ young ...	... *Nyom.*
Mother ...	... *Gadi.*
Person ...	... *Mat* [*Ma'*].
Wife	... *Gadok.*
Woman ...	... *Mat gadok.*

Anatomy.

Arm	... *Cheleh.* [? = *Chĕbeh.*]
Arm-pit ...	... *Kichek.*
Beard ...	... *Janggut* (M.)
Blood ...	... *Mahum.*
Body	... *Badang* (M.)
Breasts ♀ ...	... *Doh.*
Chest ...	... *Genal.*
Chin	... *Chinkuk.*
Ear	... *Tang.*
Eye	... *Met.*
Finger, index	*Jari* (M.)
„ little ...	
„ 2nd or 3rd	
Foot	... *Jong.*
Fore-arm ...	... *B'ling.*
Fore-head ...	... *Kening.* [*cf.* M. *Kĕning.*]
Hair	... *Suk.*
Hand ...	... *Ti*.*

Head ...	... *Kwi.**
Hips	... *Bantar* (M.)
Knee	... *Lutut.* [M. *Lutut.*]
Leg	... *Kejal.*
Moustache ...	... *Mesei.* [M. *Misei.*]
Mouth ...	... *Pang.*
Nail	... *Kuku* (M.)
Neck	... *Leher* (M.)
Nose	... *Mer** [? *Mö*].
Skin	... *Kulit* (M.)
Stomach ...	... *Er'oich.* [? *Öoich* or *ĕoich.*]
Teeth... ...	... *Lemang.*
Thigh ...	... *Berluk.** [? *Bĕlu'.*]
Thumb ...	... *Ibu jari* (M.)
Wrist ...	... *Singeh.*

---

[1] The standard form of transliteration has been added in square brackets [ ].

Clothing, etc.

Hip-cloth ♂	*Swi.*
„ ♀	*Sot.*
Necklace	*Dokor.* [M. *Dokoh.*]

Nose-quill	——
Tattoo	——

Food.

Rice, cooked	*Nasi* (M.)
„ uncooked	*Beras* (M.) [*Bĕras.*]

Rice, unhusked	*Bi.*
Tapioca	*G'lack.*

House, etc.

Bed	*Baring.* [? *cf.* Mal. *Baring*, "to recline."]
Box	*Chok.*
Door	*Pintu* (M.)
Fire	*Us.*
Floor	*Lantok.* [*cf. Lantok long* = tree-bark, because of its material.]
Grave	*Kumut.* [? *Kĕmut.*]

House	*Dong.*
Music	*Bunyih.* [M. *Bunyi.*]
Plantation	*Umat.* [M. *Huma* or *Uma.*]
Roof	*Plong.*
Scent	*Bawi* (M.)
Smoke	*Jeluk* [*Jĕluk*].
Window	*Jendela* (M.)

Weapons, etc.

Blow-pipe	*Balau** [*Bĕlau*].
Darts	*Damak.* [M. *Damak.*]

Poison	*Ipoh* (M.)
Quiver	*Look** [? *Luk*].

Zoology.

(a) *Mammals.*

Antler	*Gading* (M.)
Ape, Gibbon	*Timor.* [*cf. Tĕmbok.*]
Bear	*Bruang* (M.)
Beast	*Binatang* (M.)
Boar, wild	*Ketoo.* [*Ketu* or *Kĕtu.*]
Cat, domestic	*Kuching* (M.)
Civet-cat	*Ginsing.* [? *Jinseng.*]
Chevrotain	*Kanchek.* [M. *Kanchil.*]
Deer, Barking	*Kijang* (M.)
„ Sambur	*Rusa* (M.)

Dog, Domestic	*Jor.* [In neighbouring dialects, *Chă* or *Cho'*.]
Dog, Wild	*S'rigalah.* [M. *Srigala.*]
Elephant	*Merat* [? *Mĕrat*].
Flying Fox	*Kluang* (M.)
Gaur	*S'ladang* (M.)
Goat	*Kambing* (M.)
Horn	*Gading* (M.)
Leopard	*Rimau bintang* (M.)
Monkey, Leaf	*Rotek.*
„ Macaque (*M. Cynomolgus*)	*Krah* (M.)

Monkey, Macaque (*M. nemestrinus*)	*Koh.*
Porcupine	*Babi landak* (M.)
Rat	*Ganek* [? *Kane'*].
Rhinoceros	*Badak* (M.)
Squirrel	*Tupai* (M.)
Tail	*Ekor* (M.)
Tapir	*Tenoh.* [M. *Tĕnok.*]
Tiger	*Ahah* [*A'a*].
Tusk	*Lamoi.*

(b) *Birds.*

Argus Pheasant	*K'woh.* [M. *Kuwau* or *Kwau.*]
Bird	*Chim.*
Duck	*Iti* [M. *Itek*].
Egg	*Kupor* [? *Kĕpo'*].
Fowl, Domestic	*Ayam* (M.)
Hornbill	*Enggang* (M.)

(c) *Reptiles.*

Crocodile	*Boya* [M. *Buaya*].
Frog	*Katak* (M.)
Lizard	*Chitchak.* [M. *Chichak.*]
Monitor Lizard	*Biawa* (M.)
Snake	*Tigor.* [? *Tijå* or *Tijau.*]

(d) *Fish.*

Fish	*Kah.**

(e) *Invertebrates.*

Beetle	*Kumbang* (M.)
Butterfly	*Klebok.* [? *Klabok* or *Kĕlabok.*]
Centipede	*Kiyip.*
Cicada	*Riang-riang* (M.)
Mosquito	*Agal.* [? *Agai* : cf. M. *Agas,* "sand-fly".]
Sand-fly	*Mai.*

Jungle.

Bamboo	*Buluh* (M.)
Branch	*Batang* (M.)
Flower	*Bunga* (M.)
Fruit	*Plih.*
Jungle	*Marih* [? *Mĕri*].
„ to fell (big)	*Gor long.*
„ „ (small)	[*Gåh long.*]
Leaf	*Dahun* (M.)
Mud	*Luk.*
Seed	*Biji* (M.)
Stick	*Tongkat* (M.)
Stone	*Batu* (M.)
Swamp	*Paya* (M.)
Thorn	*Durih* [M. *Duri*].
Track	*Rentis* (M.)
Tree	*Tekor long.*
Wood	*Long.*

Colours.

Black	All Malay words.
Blue	
Green	
Red	All Malay words.
White	
Yellow	

Physical Geography, etc.

Cape	*Tanjong* (M.)
Cold	*Sejuk* [M. *Sĕjuk*].
Day	*Hari* (M.)
Daylight	*Choi.*
Down-stream	*Ilir* (M.)
Hill	*Chong.*
Hot	*Panas* (M.)
Land	*Teh.**

Lightning	*Kilat* (M.)
Moon	*Bulan* (M.)
Mountain	*Dol.*
Night	*Doi.*
Rain	*Gemar.* [? *Gĕmā* or *Gĕmar.*]
Rapid	*Churan.* [? cf. M. *Choram.*]
River	*Sungei* (M.)
„ mouth of	*Kuala* (M.)

River, source of	*Ula* (M.)
Sea	*Laut* (M.)
Sky	*Lengat* (M.) [? *Langet* = M. *Langit.*]
Star	*Bintang* (M.)
Sun	*Mata-hari* (M.)
Thunder	*Petih* [M. *Pĕtir*].
Up-stream	*Ulu* (M.)
Water	*Doh.*

Personal Pronoun.

I	*Heh* [*cf.* *Hē* or *Hĕ'* in neighbouring dialects = you.]

Demonstrative Pronouns.

That	*Nenki.*
This	*Nihot* [?=*Nahå.*]

Adjectives.

Bad	*Suhut.* [? *cf.* *Su'ut* = rotten.]
Big	*Kadoi.*
Bitter	*Kedeh.*
Blind	*Buta* (M.)
Brave	*Brani* (M.)
Clean (see good)	*Lem.*
Clever	*Serut.* [? *Sĕröt* or *Sĕrö'* = "know."]
Crooked	*Bengkok* (M.)
Difficult	*Susah* (M.)
Dirty	*Koto* [M. *Kotor*].
Dry	*Kering* (M.) [*Kĕring.*]
Easy	*Sen'ang* (M.) [*Sĕnang.*]
False	*Bohong* (M.)
Familiar	*Biasa* (M.)
Fast	*Ujus.*
Flat	*Cheper* (M.)
Foolish	*Bodoh* (M.)
Good	*Lem.*
Hungry	*Silih.*
Lazy	*S'leh.*

Little	*Chot.*
A little	*Munchut.*
Long	*Jelang.*
Old	*Tua* (M.)
Round	*Bulat* (M.)
Sharp	*Bukut.*
Short	*Jelok.*
Slow	*Pĕrlahan-pĕrlahan* (M.) [*Plan-plan.*]
Sour	*Assam* (M.)
Strong	*Kwat* (M.)
Sweet	*Manis* (M.)
Thick	*Sut.*
Thin	*Maseh.*
Thirsty	*Chedok.*
Tired	*Panut.* [M. *Pĕnat.*]
True	*Hahun.* [? *Nahön* or *Nahöl* = true.]
Wet	*Tukul.*
Wicked	*Jahat* (M.)
Wide	*Lebar* [M. *Lĕbar.*]
Young	*Muda* (M.)

Adverbs.

All	*Sumua* (M.)
Before	*Dapan* (M.)
Behind	*Chelong.* [? *Chĕloñ* = back.]
Far	*Lup.*
Here	*Nihot.* [See "this."]
Left	*Kiri* (M.)
Much	*Nyum.* [? *Nom* or *num.*]
Near	*Meng.*
Right	*Kenan.* [M. *Kanan.*]
There	*Hookih* [*Huki*].

Interrogatives.

How many	*Berapa* (M.) [*Bĕrapa.*]
What	*Namat* [*Nama'*].
Where	*Mana* (M.)
Why	*Awat* (M.)

Verbs.

Awaken	*Lek.*
Bite	*Gigit* (M.)
Born	*Kenon.* [? *Kĕnon, cf.* "child."]
Call	*Temor.* [*Tĕmoh* or *Tĕmong.*]
Catch	*Igup.* [? *Igap* or *Higap.*]
Climb	*Kayal.*
Come	*Mai.* [*cf.* M. *Mari.*]
Cook	*Tekong.*
Cut	*Kitong.*
Dance	*Menari* (M.)
Die	*Kubus** [*Kĕbus*].
Do	*Kapoi.*
Do not	*Bur* [? *Bö*].
Drink	*Chadoh.* [? lit.: eat water = *chā doh* (*or dōō*).]
Eat	*Chechah.**
Extinguish	*Lut.*
Fight	*Gadow* (M.) [? *Gado'.*]
Give	*Kajun.*
Go	*Chochor.*
Have	*Ada* (M.)
Have not	*Tada* (M.)
Hold	*Pegang* (M.) [? *Pĕgang.*]
Kill	*Kapong.*
Kneel	No word.
Know	*Surut.* [? *Sĕröt*, see "clever."]
Laugh	*Glok.*
Light	*Lok.*
Listen	*Kaiyung.*
Live	*Yis.* [? *Ris* = alive.]
Look	*Kelau* [?*Chĕliau*].
Place	*Tahoi.* [? *cf. tůha or tui* = that, there.]
Play	*Main-main* (M.)
Prick	*Tikam* (M.)
Pull	*Kakul.*
Push	*Tolak* (M.)
Release	*Loh.*
Return	*Yut.*
Run	*Dut* [? Duh].
See	*Kaiyi.*
Shake	*Goyang* (M.)
Sick (to be)	*Gehup.*
„ (fever)	*Tekat* [*tĕkat*].

Sing...	... ... *Menanyi* (M.)
Sit ...	... ... *Kum.*
Sleep	... ... *Jitik.*
Smell	... ... *Hun.*
Speak	... ... *Chakap* (M.)
Stand	... ... *Jun* [? *Jöng*].
Stare	... ... *Pengong.*
Steal	... ... *Sisit.* [See "Thief," in Plus Sakai vocabulary.]
Strike	... ... *Kapet.*
Swim	... ... *Beranang* (M.)

Take	... ... *Kakul.* [*Bĕrĕnang.*]
Tell...	... ... *Bilang* (M.)
Wait	... ... *Doi.*
Walk	... ... *Yor.*
Want	... ... *Gah.*
Wash	... ... *Chuchi* (M.)
Weep	... ... *Nyum.* [? *Nyam* or *yam.*]
Work	... ... *Kerja* (M.) [? *Kĕrja.*]
Wound	... ... *P'ris.*

No. ... ... *Rot.*

Numerals.

One...	... ... *Moi.*
Two...	... ... *Ma.*
Three	... ... *Umpih* [*ĕmpi'*].

From "4" onwards the numbers are borrowed from the Malay language.

Obs.—There is no word for ghost, good or evil spirit, etc.

N.B.—Words marked "(M.)" are Malay words actually in use among the *Orang Bersisi.*

Words marked * coincide with the Ulu Plus words.

The pronunciation of the words is based on that used in Swettenham's *Malay Dictionary* [but there are exceptions, *e.g.*, *Ketoo* = *Kĕtu* (pig) and *hookih* = *huki* (there), etc.]—Ed.

APPENDIX II.

A SHORT LIST OF WORDS IN USE AMONG THE ORANG BERLANUS [BÉLANAS.]

Father	... ... *Bapai.* [Mal. *Bapa.*]
Mother	... ... *Moi.*
Child	... ... *Enek.* [*cf.* Malay "*Anak.*"]
Wife	... ... *Awak.*
Husband	... ... *Awak.*
Malay	... ... *Jebok* [*Jĕbo'*].

Forearm	... ... *Jebeh.* [? *Jĕbeh* or *Chĕbeh.*]
Forehead	... ... *Kening.* [*cf.* Mal. *Kĕning.*]
Elephant	... ... *Permasil.*
Tiger	... ... *Gubin.* [in neighbouring dialect = "dog."]

Wild pig	*Isim* [*cf. Risim.*]
Porcupine	*Latoi.*
Deer (Sambur)	*Guntau.*
Butterfly	*Clabok.* [*Klabok* or *Kĕlabok.*]
Mosquito	*Gemos* [or *Kĕmus.*]
Jungle	*Rimah.* [Mal. *Rimba.*]
Tree	*Pohun.* [Mal. *Pohon.*]
Come	*Mai.* [*cf.* Mal. *Mari.*]

Give	*Berip.* [*cf.* Mal. *Bĕri.*]
Cut	*Kerat.* [Mal. *Kĕrat.*]
Raise	*Bawai.*[1] [Mal. *Bawa.*]
Quarrel	*Klahih.* [Mal. *Bĕrkĕlahi.*]
Wash	*Sapoi.* [*cf.* Mal. *Sapu,* "to wipe," "to *sweep.*"]
All	*Mahit.*
No	*Nyap.*
Lazy	*Plasup.*
Dry	*Tohu.* [? *cf.* Mal. *tohor,* "shallow."]

Terms used by the "Orang Berlanus" (Bĕlanas) for the different parts of the blow-pipe and quiver.

Blow-pipe	*Temiang* [*Tĕmiang*].
Outer pipe	*Tagor.*
Inner „	*Anak temiang.*
Mouth of blow-pipe	*Tebong* [*Tĕbong*].
Distal end of blow-pipe	*Lengai.*
Inside of ditto, which is made with resin in the shape of a "lip" to increase the speed of the dart	*Sengloh.*
Resin on the distal end of blow-pipe	*Gelah.*
Ornamentation on blow-pipe	*Hokeh* [*cf.* Mal. *Ukir*].
Quiver	*T'lah.*
Cap of quiver	*Tungkap t'lah.*
Bindings around quiver, in order from the top.	(1) *Simpai tujoh:* (2) *Simpai lapan;* (3) *Simpai lima;* (4) *Simpai larat* [*cf.* Mal. *Simpai*].
Patch of resin on bottom of quiver to fix head on darts	*Kaboh t'lah.*
Darts	*Damak* [Mal. *Damak*].
Head of dart	*Pabong.*
Cases for dart	*P'lek* [in neighbouring dialects, *pĕlät* and *pĕlait*].
Down for plugging mouth of blow-pipe when "firing	*Rabok* [Mal. *Rabok*].

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[1] The usual Malay word for "raise" is *angkat,* which also means "to carry or bring" [Mal. *bawa*].

APPENDIX III.—HEAD MEASUREMENTS.

Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Length	174	173	163	181	183	173	172	172	170	181	191	173	165	164	155	163	174	181	180	180
Breadth	142	139	141	132	140	142	140	131	131	131	142	148	133	142	131	133	133	141	132	143
Vertex to nasion	137	116	123	112	129	122	119	105	111	123	123	136	136	144	131	122	131	104	114	140
„ mouth	204	166	197	196	201	192	188	177	177	197	211	188	199	203	194	199	202	193	180	205
„ chin	231	221	233	211	239	218	210	196	196	229	251	211	219	223	228	221	222	222	215	240
„ tragus	137	116	114	123	137	125	115	116	116	129	133	125	132	126	131	110	132	130	127	138
Bizygomatic breadth ...	123	112	103	101	103	111	101	101	101	103	110	101	100	110	103	94	93	110	94	103
Bigonial breadth	140	129	123	122	132	130	110	113	122	129	130	130	112	120	121	122	120	133	124	130
Length of nose	49	42	47	46	53	48	46	43	46	53	49	51	44	38	46	52	52	52	52	43
Breadth „	42	39	40	37	39	39	37	31	38	39	45	39	35	37	4	35	41	45	37	39
Nasion to chin (direct) ...	111	109	111	118	116	110	112	95	101	114	123	97	90	95	106	102	106	107	96	108
Length of R. ear	63	62	58	67	58	57	52	51	53	57	65	58	57	54	54	54	61	55	59	60
Breadth of „	30	35	30	30	30	31	27	31	30	31	35	30	28	31	26	28	25	30	32	31
Length of L. ear	62	60	60	68	60	56	54	55	54	61	59	55	57	56	56	52	59	58	55	65
Breadth	30	35	30	31	33	34	29	33	30	31	31	30	28	33	29	33	26	35	32	33

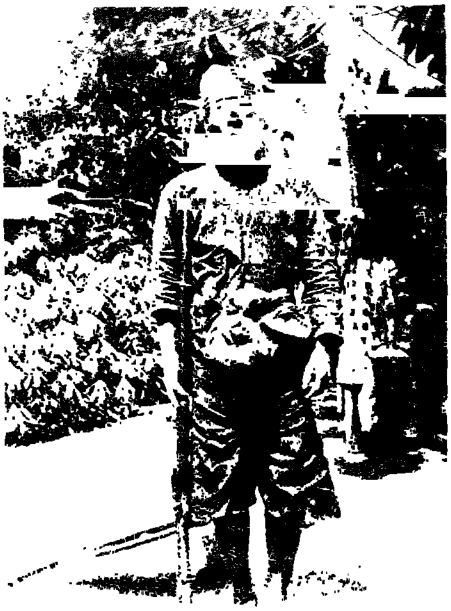


FIG. 1.—ORANG BUKIT (BĔLANAS).
(SEE APP. IV, NO. 2.)

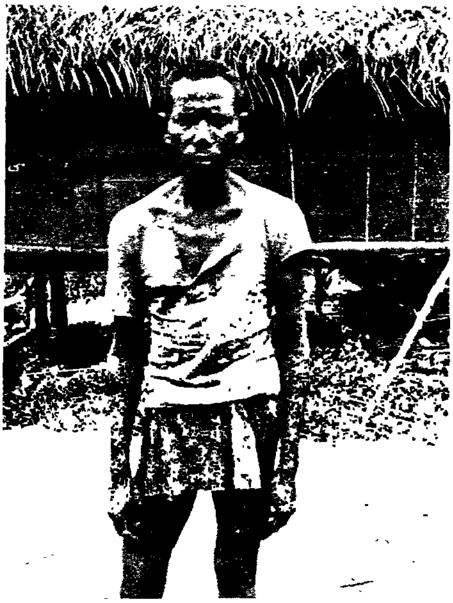
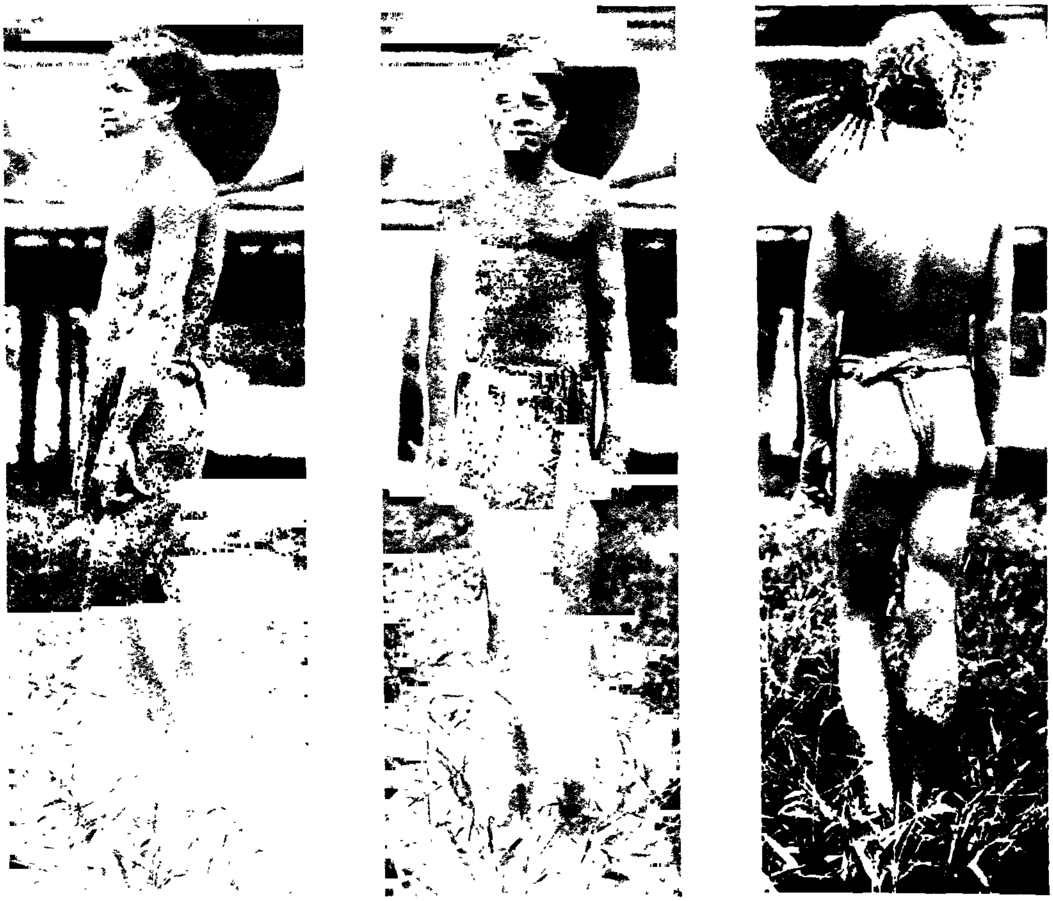


FIG. 2.—ORANG BUKIT (BĔLANAS).
(SEE APP. IV, NO. 4.)



FIGS. 3, 4, 5.—ORANG BUKIT: HALF CASTE BĔSISI AND BĔLANAS.
(SEE APP. IV, NO. 17.)

THE ABORIGINES OF SUNGEI UJONG.

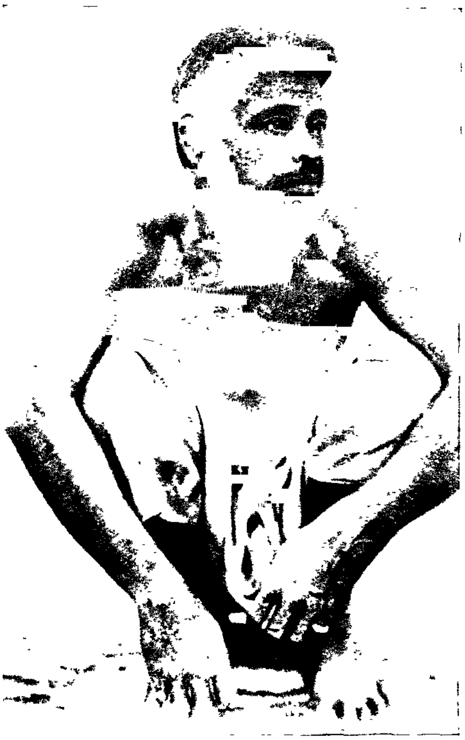


FIG. 1.—ORANG BUKIT (BĔLANAS).
(SEE APP. IV, NO. 1.)

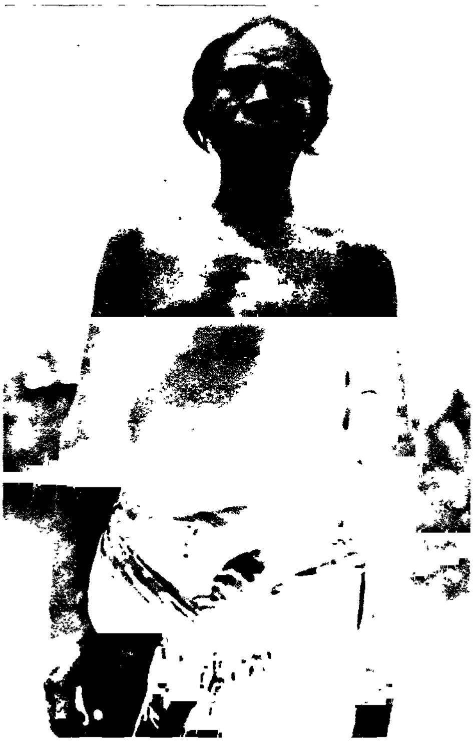
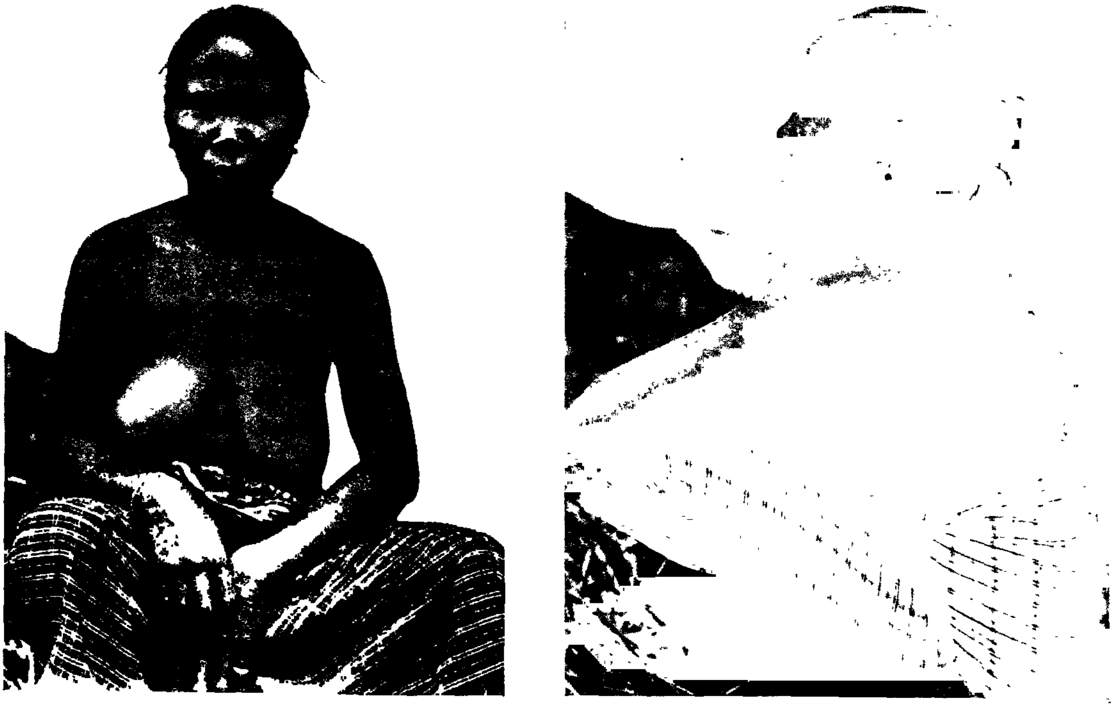


FIG. 2.—ORANG BUKIT (BĔLANAS).
(SEE APP. IV, NO. 11.)



FIGS. 3 AND 4.—ORANG BUKIT (BĔLANAS). (SEE APP. IV, NO. 12.)

THE ABORIGINES OF SUNGEI UJONG.

APPENDIX IV.—DESCRIPTIVE CHARACTERS.

Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Tribe	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.	Orang Bukit.
Name	Batin Jalel.	Penglima Gerum.	Penglima Gajah.	Jok'ra.	Samunyih.	Tunggal.	Senot.	Kulup.	G'lek.	Sengor Raja.	Penglima Hitam.	Ladek.	Jekas.	S'Inah.	Mangih.	Burok.	Kulup.	Petrus D'ris.	Penglima Tahat.	Kulup Tepai.
Sex	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♀	♀	♀	♀	♂	♂	♂	♂	♂
Locality	Ulu Beranang.	Ulu Tarun.	Ulu Beranang.	Ulu Beranang.	Ulu Beranang.	Ula Tarun.	Ulu Beranang.	Ulu Beranang.	Ulu Beranang.	Ulu Beranang.	Ulu Tarun.	Ulu Beranang.	Ulu Beranang.	Ulu Beranang.	Ulu Beranang.	Ulu Beranang.	Batang Labu.	Batang Labu.	Batang Labu.	Batang Labu.
Age	± 45	± 38	± 28	± 55	± 38	± 18	± 12	± 9	± 14	± 30	± 40	± 38	± 30	± 26	± 40	± 28	± 20	± 38	± 50	± 28
Condition ...	Stout.	Medium.	Medium and good.	Poor.	Stout.	Stout.	Stout.	Medium.	Stout.	Medium.	Stout.	Medium.	Medium.	Stout.	Medium.	Medium.	Medium.	Stout.	Poor.	Medium.
Skin colour ...	Reddish brown.	Pale reddish brown.	Reddish brown.	Reddish brown.	Reddish brown.	Pale olive brown.	Reddish brown.	Reddish brown.	Reddish brown.	Olive brown.	Reddish brown.	Dark olive brown.	Dark olive brown.	Reddish brown.	Olive brown.	Reddish brown.	Reddish brown.	Reddish brown.	Olive brown.	Reddish brown
Eyes „ ...	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.	Dark brown.
Hair „ ...	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black.	Black—grey with age.	Black.
Character of hair	Thick and slightly waved.	Thick and slightly waved.	Thick and wavy.	Thick and straight (cut short).	Thick and wavy.	Thick and straight.	Thick and slightly wavy.	Thick and straight.	Thick and straight (cut short).	Wavy.	Thick and wavy.	Abundant—long and straight.	Abundant—long and straight.	Abundant—long and straight.	Long and straight.	Cut short, straight.	Thick and wavy.	Thick and slightly wavy.	Straight. (cut short).	Straight (cut short).
Hair on face ...	Abundant and wiry.	Little on upper lip.	Little on upper lip.	Scanty on lip and chin.	Scanty on lip and chin.	Absent.	Absent.	Absent.	Absent.	Scanty on lip and chin.	Scanty.	Absent.	Absent.	Absent.	Absent.	Clean shaven.	Absent.	Scanty on lip and chin.	Scanty on lip and chin.	Plentiful (shaves).
„ body ...	Little on fore-arm and chest.	Scanty on breasts.	Absent.	Armpits only.	Little on legs.	Little on legs.	Absent.	Absent.	Absent.	Absent—little on legs.	Absent—little on legs.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent—scanty on leg.	Absent.	Plentiful.
Shape of face ...	Wedge-shaped.	Modified wedge-shaped.	Rounded wedge-shaped.	Wedge-shaped.	Wedge-shaped.	Rounded wedge-shaped.	Rounded wedge-shaped.	Wedge-shaped.	Wedge-shaped.	Wedge-shaped.	Wedge-shaped.	Plump wedge-shaped.	Full wedge-shaped.	Full wedge-shaped.	Full wedge-shaped.	Modified wedge-shaped.	Modified wedge-shaped.	Rounded wedge-shaped.	Wedge-shaped.	Wedge-shaped.
Profile of nose ...	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid.	Negroid (not pronounced).	Negroid.	Negroid.	Negroid.	Negroid.
Prognathism ...	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.	Absent.
Lips	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick.	Thick, not so thick as others.	Thick.	Medium, not so thick as No. 17.	Thick.	Thick.
Remarks... ...	Plate XXVI, Fig. 1.	Plate XXV, Fig. 1.	—	Plate XXV, Fig. 2.	—	Son of No. 2.	Son of No. 1.	Son of No. 4.	—	—	This man came from Pahang years ago. Plate XXVI, Fig. 2.	1 child ♀ Plate XXVI, Figs. 3 and 4.	Wife of No. 10.	One child dead.	Wife of No. 1, 6 children, 5 ♂, 1 ♀.	—	This man was an Orang Bersisi half caste Orang Berlanus. Plate XXV, Figs. 3, 4 and 5.	—	—	—

APPENDIX V.—BODY AND LIMB MEASUREMENTS.

Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Total height, erect ...	1,620	1,605	1,608	1,560	1,578	1,633	1,395	1,249	1,362	1,568	1,629	1,510	1,421	1,379	1,436	1,463	1,557	1,472	1,516	1,507
„ sitting..	816	861	842	805	852	859	713	639	683	880	834	799	750	755	783	742	812	780	744	779
„ kneeling	1,195	1,203	1,192	1,178	1,184	1,226	1,041	940	1,022	1,173	1,203	1,165	1,151	1,165	1,096	1,093	1,174	1,115	1,108	1,133
„ umbilical	986	946	972	950	946	962	841	740	792	933	953	—	—	—	—	891	915	850	978	866
Height to chin ..	1,405	1,371	1,392	1,352	1,329	1,490	1,202	1,058	1,146	1,344	1,394	1,334	1,225	1,170	1,232	1,245	1,335	1,248	1,262	1,266
„ sternal notch	1,330	1,297	1,306	1,273	1,285	1,324	1,135	1,008	1,105	1,284	1,332	1,255	1,151	1,105	1,177	1,195	1,274	119	1,201	1,214
Malleolar height ...	87	70	73	70	65	70	81	69	72	85	72	—	66	67	71	69	69	59	65	52
Length of R. foot ...	253	240	250	251	240	250	221	200	203	230	250	249	201	202	230	211	242	222	230	231
„ L. foot ...	252	240	242	253	232	250	221	204	203	233	260	242	204	201	230	212	241	224	230	233
„ R. upper limb	620	715	705	725	676	704	550	520	557	656	683	638	578	569	655	605	573	601	618	609
„ R. forearm	350	413	437	435	414	433	358	324	355	411	440	401	375	351	378	365	400	387	375	378
„ R. hand ...	110	190	185	189	178	185	155	148	145	180	190	185	163	154	176	160	190	172	174	168
„ L. hand ...	120	180	180	185	180	194	162	150	155	180	185	180	155	158	180	153	192	181	175	163
Breadth at shoulders	113	355	350	315	270	350	275	250	273	330	372	333	240	290	311	355	33	33	30	29
„ hips ...	290	350	171	291	260	262	230	201	240	261	301	-	-	-	-	242	263	243	240	241
Circumference of chest	790	790	805	785	750	820	680	595	732	770	860		-			754	792	795	765	790
„ „ supra malleolar R.	215	139	205	199	200	213	230	165	180	205	227		—	-		173	205	202	185	195

REPORT ON THE ETHNOLOGY OF THE SOUTH-EASTERN TRIBES OF VANCOUVER ISLAND, BRITISH COLUMBIA.

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This paper contains a summary of my studies of the Salish tribes of the south-eastern portion of Vancouver Island, known to us under the name of LEkúñEn, with additional notes on the neighbouring Cowitchin or Island HalkōmélEm tribes.

I have again to acknowledge my indebtedness to the Government Grant Committee of the Royal Society for another special grant of £40, by the aid of which I was enabled to cover a larger field of inquiry and make a closer examination of the ethnology of this section of the province than I could otherwise have accomplished.

The LEkúñEn, together with the cognate tribes of the Saanich, the Clallam, and the Sooke, form a division apart from the rest of the Salish of British Columbia, and belong rather to that portion of the Stock whose habitat lies immediately to the south of the International Boundary; and just as the various Cowitchin tribes speak of themselves collectively as the HalkōmélEm, or "speakers of the same language," so do the tribes of this division call themselves by the term LEk·oñénEñ, which means the same thing. By this convenient term I shall hereafter call them when speaking of them collectively. In their social organisation and in their language they have, as will be seen, many interesting features peculiar to themselves.

As I came in contact with the Cowitchin or Island HalkōmélEm tribes, I took occasion to learn, for the sake of comparison with the mainland tribes of this division, something of the traditions and language of this group. Some of the results of this study will be found herein incorporated.

The natives from whom I received most assistance in my studies of the LEkúñEn, are William Jack QámEtctEn, a lineal descendant of the old chiefs; SinópEn, the chief of the Esquimalt Band; and the wife of Thomas James, my chief informant on the Cowitchin, the husband and wife being of different tribes.

I fear the study of these tribes has been delayed too long to obtain the best results; all the older people, versed in the knowledge and ways of the old days, have passed away, taking with them much valuable information that will now be lost to us for ever.

I have recorded here all that a diligent care enabled me to gather concerning the past of the LEkúñEn. Their comparatively long contact with the whites, who settled in their midst more than a half century ago, has much modified their lives and customs; and the present generation knows but little of the life and conditions of its forefathers. They are by no means the best representatives of their race; indeed, of all the Salish tribes of British Columbia, I fear they have benefited least by contact with a superior civilisation. Alcoholism and all that follows in its train have wrought sad havoc among them both physically and morally. Touching the former, their mortality has been appalling. From a strong and populous community of 8,500 souls in 1859, they have dwindled down now to about 200, or less than one-fortieth of their former number. They appear doomed to speedy extinction. In the seventeen years which have elapsed since Dr. F. Boas made his first reconnaissance of the Island Salish, many changes have taken place, especially among the LEkúñEn. Upon many points on which he was able to gather information, I could learn nothing at all, those who might have supplied the information having all passed away. My notes in some points are not quite in agreement with his, particularly as to the local divisions of the LEkúñEn; but in the main the information gathered in 1905 harmonises with that gathered in 1888–9, such differences as exist being such as might, in the circumstances, be expected to occur.

ETHNOGRAPHY AND SOCIOLOGY.

According to my informants, the LEkúñEn occupied the following villages before the advent of the whites and the founding of Victoria by Governor Douglas:—

1. S'ñÉka } *Cadboro' Bay.*
2. Sluk·^{u} }
3. Tcúkñīn, *Shoal Bay.*
4. QsāpsEm, *On the Gorge.*
5. Sk·uñínEs, *Discovery Island, off Oak Bay.*
6. Tcīakaúitc, *Around Ross Bay.*
7. SoñEs, *Near Parry Bay.*
8. Nukstlaiyum }
9. Tcī́ánuk· } *Beecher Bay.*
10. Tcīwḗtsun }
11. Sqēmätlitl, *Esquimalt Harbour.*

After the founding of Victoria, first called Camósun, after the Indian name of the "rapids" on the Gorge, the natives flocked into the harbour in great numbers and settled at what is now the foot of Johnston Street. They were known as the Swíñhoñ, and were composed of members of the various outside villages. This became a populous centre, so populous, indeed, as to inconvenience the colonists; and Governor Douglas induced them to cross the bay and settle on the other side, where there has been a mixed settlement ever since, known as the "Songish Reserve." He also transplanted the village of the QsápsEm, who dwelt near the spot where the Parliament Buildings now stand, to Esquimalt Harbour where a remnant of the tribe still lives.

Dr. F. Boas classified the various divisions of the LEkúñEn as "gentes," but

I prefer to regard them as septs. I can see no difference between the sub-division of the Island tribes and those of the Delta tribes. This word *gentes* had a very loose meaning in this country at the time when Dr. Boas wrote. and I am not sure what he meant to convey by it. Each local group or sept looks upon itself as distinct from the rest, and believes it had a separate origin. Each claims to be descended from a certain "first-man," but yet the individual members of the local group do not all regard themselves as akin to one another, as they should if the local group were a true gens. At any rate, if the sub-divisions of the LEkúñEn are gentes, then so are also the sub-divisions of the Delta tribes, for they also claim descent equally from "first men" in the same way. The only difference I can perceive between the sub-divisions of the LEkúñEn and those of the HalkōmḗlEm, or the Síciatl or the Sk·qṓmic, is that the first have separate and exclusive fishing, hunting, root and berry-grounds, and the others have not. But this feature of the sociology of the LEkúñEn I regard as the result of their peculiar social organisation and not as evidence of their division into gentes.

Each local community is, or was, composed of distinct classes or castes. First comes the caste of the chieftains, the office of Headman being strictly hereditary among the LEkúñEn; second, the caste of the hereditary nobility; third, the caste of the untitled or Base-Folk; and fourth, that of the slaves. The lines of demarcation between these several classes were hard and rigid, and could not be broken except perhaps in the case of the last two. Orphaned and friendless children were sometimes pressed into servitude and thus passed into the slave class.

The sons and daughters of chiefs customarily intermarried only with those of their own caste, and thus a "princely" class was maintained. In like manner nobles married only with nobles, and no amount of wealth in an untitled person could raise him to the ranks of the hereditary nobility. This is brought out in a very interesting manner by the creation of an intermediate class which formed a kind of *bourgeoisie.* This class was distinguished from that from which it sprang by a name of its own. This, in the LEkúñEn, was *Nitcnáñit,* and the term had literally the same significance in the mind of the Indians as the word *parvenu* had in the minds of the French under the old régime. The Nitcnáñit were men who, by their ability or good luck, had acquired wealth, by means of which in giving feasts and potlatches, they had gained a certain social standing in their tribe, but as they had no "grandfathers," no pedigrees of honourable descent, and no family or kin-crests, they could not be admitted among the hereditary nobles, and so had to form a sub-class intermediate between these and the common folk.

The exclusiveness of the privileged classes is illustrated in all their social functions. On these occasions the chiefs put on lofty and condescending airs, conversed only with one another, and always formed a group apart from the others. The hereditary nobles formed a similar second group, and the untitled or common-folk, a third. The *Nitcnáñit* or *nouveaux riches* held on these occasions a rather equivocal position, determined largely by the condescension of the nobles and the degree of respect and consideration paid them by the people.

The Lᴇkúñᴇn method of receiving and placing their guests was absurdly like that in vogue in high social functions among more sophisticated peoples. Two or more of the older noblemen stood at the entrance of the Feast Chamber and received the visitors, inquiring their names or titles and those of their fathers and grandfathers, and placing them accordingly—rank being determined and marked by these as distinctly as among ourselves. Each social division or caste had its own list of names or titles, so that a person had but to give his name or that of his father or grandfather to show his social position and standing in his tribe.

Among the Lᴇkúñᴇn, titular names were bestowed upon their bearers only when they had reached and passed the age of puberty. This was done in a very formal manner among the nobles.

When a father wishes to bestow one of the family names upon his son it is customary for him to do it in the following manner: he first visits the chief of his commune and informs him of his desire and secures his consent and promise of assistance. A date is then fixed for the event, and invitations are sent broadcast throughout the neighbouring tribes. The day appointed having arrived, his guests come in from the various villages round about. In the meantime he has been making great preparations to receive and entertain them. Large quantities of food have been brought together by his family and kinsfolk; the family treasure-chests have been opened and their contents set in order for distribution at the feast. When all is ready for the ceremony the father takes his son, accompanied by the latter's sponsors, to the roof of the family dwelling—the pitch of which is exceedingly shallow and convenient for the purpose—and from this vantage ground the proceedings take place. These vary to some extent from centre to centre, and from district to district, but, commonly, the ceremony is opened by the father of the boy dancing and singing one of the family dance-songs. This song-dance is usually a more or less dramatic representation of some event, real or fancied, in the life or history of his ancestors, probably that which gave rise to the name he is going to bestow upon his son. When the dance is over a distribution of blankets or other gifts is made to honour the names of the spirits of the family, it being held to be dishonourable to speak of or even mention an ancestral name publicly without making gifts. Formerly, these gifts were always blankets, now other articles are often given. The father next calls about him some thirty or forty of the leading noblemen among his guests to act as sponsors or witnesses of the rank his son will acquire through the name he is about to receive. Two elder men, or, preferably, two aged chiefs, who know his lineage and ancestry, now bring the youth forward, and, standing one on either side of him, the elder of the two proclaims in a loud voice to the assembled audience that it is the wish and intention of the boy's father to bestow upon him his paternal grandfather's name or title. At this announcement those present express their assent and pleasure by clapping of hands and shouting.

The name or title is then given to the youth, and another distribution of blankets takes place, special care being taken to give at least one each to all the formal witnesses of the ceremony and to the officiating elders. If the father of the youth be a man of wealth he will now throw other blankets among the common, untitled folk to be scrambled for, amid much excitement and fun. When this part of the ceremony is over the feasting begins.

After the ceremony is over the youth is known by his newly-acquired name, though, according to the universal custom among the Salish, he is never or rarely called by it except on special and ceremonial occasions.

Among the LEkúñEn and cognate tribes a man could not take his own father's name, even though his father be dead, the names of deceased persons being tabooed among them for a whole generation. All the ancestral names were thus handed down in these tribes.

In connection with names, I may here say that although I did not learn anything new concerning them, I received everywhere confirmation of the statements respecting their general significance, made by "Captain Paul" as recorded in my last report.[1]

In their marriage customs the LEkúñEn differed in some interesting features from the other tribes examined, and the ceremony brings out in a very distinct manner the pride and exclusiveness of the nobles.

Among men of rank, marriage was, and to some extent still is, a very formal ceremonial affair, and the young people themselves were never permitted to choose their own mates. When a youth has arrived at marriageable age, the elders of his family look around them for a suitable bride for him, and his wishes are rarely, if ever, consulted in the matter.

When they have chosen a girl they think desirable, negotiations are opened with her parents and family. This is done by several of the suitor's (Eckwā́siñ) elder-women paying them a formal visit and diplomatically sounding them on the subject of the marriage. If the suggestion of an alliance is not favourably received, the matter drops at once, and no more is said upon it. If, however, it is favourably received, no further progress can be made at this stage, the office of the elder-women being merely to open up the negotiations. The next step in the proceedings is taken by the Ecinā́ñ, that is, the elder-men, whose duty it is to set forth the pedigree and honourable descent of the suitor.

These men now pay the girl's parents a visit, and make known to the family their young kinsman's rank and standing. Should the girl's relatives be satisfied on these points, a day is then fixed for the Eckwā́siñ to come for his bride.

When the time for the ceremony of fetching the bride comes round, the family and friends of the Eckwā́siñ's party set off in their canoes for the camp or settlement of the bride's father. They have, of course, been expected, and preparations have been made to receive and entertain them. They take with them the *ctcEtlālkwotQ*, or "bride's price," which the relatives and friends of the groom's father have assisted him in getting together. When the party arrives the bride's father immediately shuts and secures the door of his dwelling, round about which a large crowd has assembled. The groom's father now calls out to some half-dozen of the more socially prominent of those present and requests them to ask to have the door opened, that his son may seek his bride. They are encouraged in their service by gifts of blankets. These men now knock at the door, and beg the bride's father to open his door to his prospective son-in-law. For a long time he refuses to do this, but when this singular feature of the ceremony is over and the door is at length thrown open, these same men go down to the water's edge and lift the canoe containing the bridegroom and *ctcEtlālk·wotQ* bodily out of the water and convey it into the house of the bride's father. Here it is set down with the youth still in it, and he is now supposed to remain there until his bride is brought and placed beside him. This may not be for two or three days; the higher his social rank, however, the shorter the time of waiting. When the time of probation is over, the bride's father calls two elder-women of his family to him and bids them take the bride to the groom. This they do, and place her in the canoe with him. He then instructs them to place food before the youth. A large quantity of food is then placed before the young man, who eats a little and sends the rest to his friends, who have been waiting outside. This is the central feature of the ceremony, and the girl is now his wife. Those present in the house clap their hands and shout their approval of the proceedings. The groom now presents the "bride-price" to the girl's father, who shares it with his friends. These in return now make presents to the bride, and shortly after the canoe is carried back to the water, and the gathering breaks up, and the visitors return to their own village. This closes the first part of the marriage ceremony. Before, however, the ceremony is complete, a return visit has to be paid by the bride's family and friends. This usually takes place about one moon after the return of the groom to his own village. He is busy during this period making preparation for the reception of his father-in-law. The latter comes in due time laden with gifts of food and blankets. One side of the dwelling is given over to the visitors, the regular inmates occupying the other. All the friends of the groom have been invited for the occasion, and a great feast has been prepared.

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[1] *J.A.I.* xxxv, p. 126 ff.

When all is ready and the guests all present, the groom rises in his place and says to his own friends, "Before you may eat this food, so generously provided by my father-in-law, I must pay for it." "That is right and proper," respond they, "only don't delay, for we are hungry and wishful to begin." With this the groom turns to his father-in-law and publicly thanks him for his gifts. "But," says he, "I cannot accept them without making a return to you." He then counts the presents of his father-in-law and sets a generous value upon them. He now makes a return in kind, of equal or greater value, which the father-in-law accepts. When this is done he says again to his father-in-law, "I am still in your debt; I owe something to the canoes by which you brought me your present. The sails of the canoes were very serviceable; pray take five dollars on account of each sail. The bailing cups, too, were useful, for without them the food would have been injured.

Here are two dollars each for the bailing-cups. The paddles, too, must not be forgotten; without them you could not have got here. Take one dollar each for the paddles. For the canoes themselves I ask your acceptance of twenty dollars each, and for the paddlers five dollars each.

"Now, I would like to make you a present yourself. You are now my father-in-law, and it is fitting for your daughter's husband to remember her father. Here is one hundred dollars; pray take them for yourself and this hundred for your wife."

This generous distribution of money or its equivalent has been much appreciated by the recipients of the presents, and has also given great satisfaction to the groom's friends. His position as a great man is well assured from this time onward. The distribution of presents over, the feasting now begins. This is customarily kept up, accompanied with games and dancing, for several days. The longer the period the greater the event and the higher the honour and social prestige of the groom.

Of the other social customs of the LEk·oñénEñ I was able to gather little of interest, so complete has been the disintegration along these lines. The old-time "secret societies" have apparently wholly passed away, and I could learn nothing reliable concerning them. In their dwellings, dress, and food, the LEk·oñénEn closely resembled the Delta Salish and their Cowitchin neighbours.

LINGUISTICS.

As far as I am aware, no attempt has been made to set forth the grammatical structure or dialectical peculiarities of the LEkúñEn speech. Though having a few features in common with the neighbouring Halkōmḗlem, it belongs to a totally different linguistic group. Apart from the cognate tribes, the Saanich, the Clallam and the Sooke, its affinities link it with the Salish tribes of the opposite shores of North Washington rather than with any others in British Columbia. It may be said to form with the Clallam and the Lummi of Puget Sound, a distinct sub-linguistic group called by the Songish about Victoria the LEk·oñénEñ speech; the term signifying in LEkúñEn what "Halkōmḗlem" does in the Stálō or Fraser River speech—"one and the same language."

Its most noticeable feature in comparison with the other British Columbian Salish dialects is a strongly nasalised *ñ*. It has a feature also in common with the StlatlumH presented in my last report.[1] Many of its verbs end in *n*, only as a rule they are here nasalised. This *n* is the equivalent of the commoner *m* of the other dialects. Throughout the vocabulary *n* nasalised or otherwise, replaces the *m* of the Halkōmḗlem; thus:—

LEk·oñénEñ.		Halkōmḗlem.	
aluñ, *house*;	hásEñ, *to sneeze*;	lā́lEm, *house*;	hā́sEm, *to sneeze*;
su'ña, *kettle*;	séptEñ, *to tickle*;	'súma, *kettle*;	sḗtEm, *to tickle*;
stéloñ, *song*;	sā́kōñ, *to wash oneself*.	stḗlEm, *song*;	sṓQEm, *to wash oneself*.

Other examples may be seen in the vocabulary.

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[1] *J.A.I.* xxxv, p. 126 ff.

Another peculiarity is the use of the particle *kō* in verbal constructions. It corresponds to the *pa* of the Island HalkōmēlEm, and like it, though it may sometimes have a definite meaning and force, may often be left out without apparently affecting in any way the sense of the phrase or sentence. Numerous examples of its use are given below in the native texts.

The indeterminate character of the vowels is as marked in LEk·oñḗnEñ as in the other dialects examined. This applies equally to long and short vowels.

PHONOLOGY.

Vowels.

a, as in English *hat.*	i, as in English *pin.*
ā „ „ *father.*	ī „ „ *pique.*
â „ „ *all.*	o „ „ *pond.*
ä „ „ *gnat.*	ō „ „ *tone.*
e „ „ *pen.*	u „ „ *but.*
ē „ „ *they.*	ū „ „ *boot.*

E, obscure vowel as in English *flower* ; ^{u} written above the line, a vowel sound which sometimes follows the palatised k· and is only partially articulated.

Diphthongs.

ai, as in *aisle* ; au, as in *cow* ; oi, as in *boil.*

Consonants.

h, as in English.
k „ „
k·, a strongly palatised or "clicked" *k.*
ḳ, intermediate between our *k* and *g.*
tl, an explosive palatised *l.*
l, as in English mostly, but interchanging with *n* in the mouths of some speakers.
m, as in English.
n „ „
ñ, a strongly nasalised *n*, equal to *ng.*
p as in English.
p', no equivalent in English, a kind of semi-mute, semi-sonant.
s, as in English.
t „ „
w „ „
y „ „
q, as in *ch* in *loch* in broad Scotch.
Q, approximately as *wh* is uttered in North Britain.

H, as in the German *ich*.
C, as in English *sh*.
tc, as *ch* in the word *church*.
ts, as in English.
kw, as *qu* in the word *quantity*.

The comma sign ’ written above the line, indicates a pause or hiatus usually caused by the elision of a vowel. When placed at the end of a word it indicates that the final letter is uttered with stress.

Accent.

Accent in LEk·oñénEñ appears to follow the same laws as in the other Salish dialects examined.

Number.

Number in LEk·oñénEñ is distinguished by reduplication, epenthesis or diæresis. This rule applies equally to nouns, adjectives and substantive verbs. Thus :—

smḗyis, *a deer*.	smEmēgis, *deer*.
sḳā́qa, *a dog*.	skalā́qa, *dogs*.
ckwṓa, *a panther*.	ckwElṓa, *panthers*.
cḗpan, *a knife*.	cElḗpEn, *knives*.
ck·wum, *an axe*.	ckwÉlkwīkwum, *axes*.
stēkḗū, *a horse*.	stalakḗū, *horses*.
sñáñyit, *a stone*.	sñEláñyit, *stones*.
k·ā́ñi, *maiden*.	k·alā́ñi, *maidens*
swḗEka, *man*.	sōwēEka, *men*.
kElḗma (*one*), *dirty*.	kEkElḗma (*several*).
kw’stlalṓq (*one*) *old*.	kw’stlilalōq (*several*).
Eqatl-sEn, *I am sick*.	Esqulqatl-tlta, *we are sick*.

Diminutives.

knife, cépan.	*little knife*, cElacépEn.
axe, ck·wum.	„ *axe*, ckukwéakwum.
horse, stĕkḗū.	„ *horse*, stElakaíatl.
stone, sñañjit.	*small stone*, sñElañEáñit.
deer, smēyis.	*faun*, smēsátl.
dog, sḳā́qa.	*puppy*, sḳEqátl.
panther, ckwōa.	*cub*, ckwōátl.

Gender.

We find a grammatical gender of a kind in LEk·oñénEñ as in some of the other Salish dialects. It is confined to certain demonstratives, particularly those used to indicate the third person. thus, tsäa, *that, he*, and sä, *that, she*. Again, in the possessive pronouns when compounded with demonstrative particles, a similar distinction is made; but it must be clearly understood that no genderal distinction is made in the pronoun proper, only in the locative or demonstrative particles attached to it, for when these are absent so is the genderal distinction.

Personal Pronouns.

Of these we find the usual three classes, viz., the Independent, the Copulative or Enclitic, and the Incorporative.

Independent Pronouns.

I, me, úsa.	*we, us,* tlñiñEtl.
thou, thee, nű́kwa.	*you,* nukwḗlia.
he, tsā́a.	*they* { tsáa ō ṣa ō } nEnétlia.
she, sä.	

This is the common form. A Selective or emphatic form is used at times. This differs from the common form by having the demonstrative particle " tī́a " added to it, thus: tī́a úsa tīa, tlñiñEtl, etc.

Copulative Pronouns.

I, -sEn.	*we,* -tlta.
thou, -sōQ-tcē or tcī.	*you,* -sōQhā́la, tcēhā́la.

These are the common forms used in direct statements; the conditional forms are somewhat different as may be seen from a study of the verbs. The secondary forms in the second person are those commonly employed with transitive verbs, -sōQ being the common form for substantive verbs.

Incorporative Pronouns.

I will help you, kwEnáñEsEn sä.
„ „ *him,* ō kwEnáñEsEn sa tsau nītl.
Thou wilt help me, kwEnáñEsQ sa.
„ „ „ *him,* kwEnáñEt tsau nī́tl.
We will help him, ō EtlñiñEtl sa kwEnáñEt tsau nītl.
„ „ *thee,* „ „ „ kwEnáñEsE
„ „ *you,* „ „ „ kwEnáñEsEhála.
He will help me, tsau nītl sa kwEnáñEs.
„ „ *us,* „ „ „ kwEnáñetáñEtl.
„ „ *thee* „ „ „ kwEnáñEsE,
„ „ *you,* „ „ „ kwEnáñEsEhā́la.
They will help me, ō nEnētlia sa kwEnḗñEs
„ „ *thee,* „ „ kwEnḗñEsE.
„ „ *you,* „ „ kwEnḗñEsEhála.

You will help us, kwEnáñEtañEtl-sōQ-hâla.
You had better help us, éi EnasusQ-hala kwEnañEtañEtl.
„ „ *me,* ēnalia sta kwEnañEs.
I see thee, ō k·wEn-·sī-sEn.
„ *you,* ō k·wEn-sī-sEn-hāla.
„ *them,* ō k·wEn-ēt-sEn tsau nEnétlia.
„ *him,* ō k·wEn-ēt-sEn tsau nītl.
Thou seest me, ō k·wEn noñususQ, or, k·wEnésusQ.
„ „ *us,* ō k·wEn noñutl kō, or, ō k·wEn-ēt-al-Q.
„ „ *him,* ō k·wEn-ētEsQ kō, or, k·wEnōQ kwEsQ.
You saw me, ō yE-k·wEnēsQ hāla, or, ō yE k·wEn ēsEsQ hâla.
You see me, ō k·wEn noñus kō hâla.
„ „ *us,* ō wē k·wEnētañutlusQ.
You saw us coming, ō yE k·wEnētalaQusQ.
„ „ *them* „ ō k·wEnētsQ kō tsau nEnētlia.
We see you, ō wē k·wEn nōtlta.
„ „ *him,* „ „ nētlta tsau nītl.
„ „ *them,* „ „ „ „ nEnētlia.
He sees us, ō wē k·wEntEñtlta kō, or, ō yE k·wEntEñtlta.
„ „ *me,* ō k·wEnáñus kō.
„ „ *you,* kwtl k·wEntañEs kō.
„ „ *thee,* kwtl k·wEnoñsQ kō.
I like thee, nE-stlē-sōQ.
„ *you,* nE-stlē-sōQEnEkwélia.
We like thee, stlē-tltas kō(E)núkwa.
„ „ *him,* stlē-tlta kō tsau nītl.
„ „ *you,* stlē-tlta núkwélia.
„ „ *them,* „ „ nEnétlia.
Thou likest me, núkwa stlē tē usa.
Thou likest us, núkwa stlē tīa EtlñiñEtl.
„ „ *him,* „ stlēs tsau nītl.

It will be seen that in the latter verb "to like," little, if any, incorporation of the pronoun takes place. It will also be observed how different the incorporative forms in this dialect are from those in the dialects examined before.

Possessive Pronouns.

Of these, there are two forms, the General and the Selective, thus:—

General Form.

my father, nE-man.
thy „ un(E)man.
his „ man-s.
our „ man-tlta.
your „ un man-hâla.

Selective Form.

my father, tīa nᴇ man.
thy „ tᴇn (a) man.
his „ tsäa mans.
our „ tīa man-tlta.
your „ tᴇn (a) man-hā́la.

Locative Possessive Forms.

These differ from the simple possessives by having a locative particle added to them. These particles have a formal gender, and thus distinguish between masculine and feminine objects, thus:—

Object present and visible.

Masculine Form.

my dog, tīa nᴇ-sḳáqa.
thy „ tīa un-sḳáqa.
his „ tīa sḳáqas.

Feminine Form.

my dog, sīa nᴇ-sḳáqa.
thy „ sīa un-sḳáqa.
his „ sīa sḳáqas.

Object present but invisible to speaker.

Masculine Form.

my father, kw'īa nᴇ man.
thy „ kw'īa un (a) man.
his „ „ mans.
our „ „ mantlta.
your „ „ un (a) man hā́la.

Feminine Form.

my mother, kw'sīa nᴇ-tan.
thy „ „ un-tan.
his „ „ tans.
our „ „ tan-tlta.
your „ „ un-tan-hā́la.

Object absent and invisible to speaker.

Masculine Form.

my father, kw'sā nᴇ man.
thy „ kw's un (a) man.
our „ kw'sā mantlta.
your „ kw's ᴇn (a) man hā́la.

Feminine Form.

my mother, tlᴇsā nᴇtan.
thy „ tlᴇson tan.
our „ tlᴇsā tantlta.
your „ tlᴇson tan hấla.

Substantive Possessive Pronouns

mine, nᴇskwa.
thine, unskwa.
his, skwas.

ours, skwatlta.
yours, unskwa hấla.
their, skwas tsau nᴇnétlia.

It or this is mine, nᴇskwa tla.
„ „ *thine,* unskwa tla.
„ „ *ours,* tla skwatlta.
„ „ *yours,* tla unskwa hấla.
This is mine, netl nᴇskwa tla.
„ *thine,* netl unskwa tla.

These substantive forms are occasionally used with the object to emphasise the ownership, thus:—

This is my *house,* netl ō nᴇskwa ắlañ.

Reflexive Pronouns.

self, kwónetūq.

Indefinite Pronouns.

anybody, everybody, sānīa.
no-body, aúinasan.

Interrogative Pronouns.

who? san?
who is that? nitl yuqātcᴇ san?
who are you? núkwa san?
who did or made that? tūq san ā́tcis tcē?
what's that? stañ ā́tcᴇ?
whose? tūq san?

whose is that? tūq san ā́tcᴇ?
whose house is that? tūq san âtce ā́lᴇñ?
what? stañ?
what do you want? stañ kwᴇn's stlē? or, stañ ā́'tcᴇ kw's stlē?
which? tuqēin?
which do you want? tuqḗin unstlē?

which man? tuqḗin swéᴇka?

NUMERALS.

Class numerals abound in this dialect, as in the others examined. The simple or absolute forms are as follows :—

1 nÉtsa.
2 tcÉsa.
3 tlḗoq.
4 ños.
5 tlskā́tcis.
6 t'qEñ.
7 tsā́kwis.
8 t'ā́sis.
9 túqoq.
10 āpEn.
11 ā́pEn ētsa nÉtsa.

20 tsaúqkwus.
21 „ ētsa nÉtsa.
30 tlaúqcä.
40 nÉsÉtlcä.
50 tlúkutsEtlcä.
60 t'EquñEtlcä.
70 tsúk·^{u} Etlcä.
80 t'ā́sisEtlcä.
90 túqoqEtlcä.
100 nà'tcō(w)itc.
1000 āpā́nitc.

CLASS NUMERALS.

Persons.

1 nā́tsa.
2 tcäsā́.
3 tlEqā́la.

4 ñEsála.
5 tlkutc'ála.
6 t'quñála.
10 upEnā́la.

	Canoes, ships, etc.	*Long round things, as poles, etc.*	*Round things, as stones, money, etc.*
1	nEtsákwEtl.	snEtsamits.	nEtsákwituQ.
2	sEñäkwEtl.	c'ts'amits.	tcEsálitoQ.
3	ē tlḗtloq.	stlōqamits.	tlEqálitoq.
4	ē nóñus.	sñisamits.	ñEsálitoQ.
5	ē tlā́kais.	——	——
10	ē ā́pEn.	sEpEnamits.	apEnálitoQ.

	Hats.	*Houses.*	*Trees.*
1	nEtsā́wok.	nEtsaútoQ.	snEtcéEtltc.
2	tcEsā́wok.	súñtoQ.	tc'séEtltc.
3	tloq(w)ā́wok.	tlḗoqtoQ.	——
5	tlukutcsāwok.	——	——
10	EpEnā́wok.	Epanṓtoq.	sEpEnéEtltc.

PARTITIVE NUMERALS.

half, utl tcuq.

DISTRIBUTIVES.

one each, nEtsätōQ.
two „ tcEsatūQ.
three each, tlēoqtuQ.
four „ ñostūQ.
ten each, āpEntūQ.

ORDINALS.

first, ĕ tltcála.
second, ē yistá́sEtl.
third, or middle, or inside, ē stäsEtl.
last, ē tlkwā́was.

It is interesting to note that the particle ĕ is in this dialect employed with ordinals and also with some of the class numerals, such as canoes, ships, etc. In the StlatlumH dialect we find it entering into the formation of the Distributives. The use of identical particles or terms in different ways is one of the most interesting features of the Salish language. While revealing the common origin and unity of the various dialects, notwithstanding their general diversity of form and structure, it shows also the plastic informal condition the language must have been in before these dialects arose.

ADVERBIAL NUMERALS.

once, nEtsaúq.
twice, suñsañ.
thrice, tleq(w)ā́tl.
four times, ñEsā́tl.
ten times, apEnā́tl.

VERBS.

The method of inflecting the Verb in LEk·oñēnEñ is the same as that observed in the other Salish dialects examined. A regular past is formed by adding *lā* to the present stem, usually between the stem and the pronominal element. This *lā* is probably the *nē* or *lē* of the Halkōmēlem dialects. The simple future is formed by adding to the verb stem the particle *sā*. This also is probably a modified form of the *tsa* or *tca*, the future particle of the Halkōmēlem dialects. This similarity is noteworthy. It is the first time that we have found the signs for the "future" alike in any two of the dialects; heretofore we have met with a different form in each dialect examined, and that in dialects more closely related to one another than is the LEk·oñēnEñ with the Halkōmēlem.

SUBSTANTIVE VERB.

Present Tense.

sick, Esqátlatl.

I am sick, Esqátlatl-sEn.
thou art sick, Esqátlatl-sōq.
he is sick, Esqátlatl tsáa.
she „ „ sE.

we are sick, { Esqulqátl(E)-tlta.
Esqátlatl-tlta.
you „ „ { Esqulqátl-sōq hála
Esqátlatl „ „

they are sick, Esqátlatl tsau nEnítlia.

Aorist.

I was sick, Esqátlatl-lā-sEn.
thou wast sick, Esqátlatl-lā sōq.
we were sick, Esqátlatl-lā-tlta.

we were sick, Esqulqátl-lā-tlta.
you „ „ Esqátlatl-lā-sōq-hála.
„ „ „ Esqulqatl-lā-sōq-hála.

The plural forms are optional; the speaker uses either, though the Esqulqatl form is the more idiomatic. In the Sooke dialect the singular form is always "Esqatl." The duplication here seen seems to be peculiar to the LEkúñEn.

There is a secondary past which answers pretty nearly to our "perfect past," thus:—

I have been sick, klā-lā-sEn-sqátlatl.
thou hast been sick, klā-lā-sōq-sqátlatl.
we have been sick, klā-lā-tlta-sqátlatl, or, Esqulqatl.
you „ „ klā-lā-sōq-sqátlatl-hála, or, Esqulqatl-hála.

From the native texts given below, it will be seen that the particle *kō* is largely used in verbal constructions. It is difficult to render this into English, as we have no equivalent for it. Its use is idiomatic in the LEk·oñēnEñ, and its absence does not, at least in many instances, affect the meaning of the sentence It answers to the "*pa*" of the Island HalkōmēlEm, a particle wholly absent in the Fraser River dialects of this linguistic group.

Future Tense.

I shall be sick, Esqatlatl-sEn sä.
thou wilt be sick, „ -soq sä.

we shall be sick, Esqatlatl-tlta sa.
you will „ „ „ sōq-hála sa.

Conditional Forms.

I think I am going to be sick, Esqatlatl-yūq-sEn-sa.
when I am sick, kwEnEs Esqatlatl lā.
if I am sick, kwE esqatlatl-En.
when thou art sick, kw's En-Esqatlatl lā.

if thou art sick, kwE Esqatlatl-ōq.
when we are sick, kw's Esqulqatl-tlta lā.
if „ „ „ kwE „ „
when you „ „ kw's En-Esqulqatl-lā-hā́la.
if „ „ „ kwE Esqulqatl-hā́la.

Dubitative Forms.

I may be sick, ēwā kō Esqátlatl-sEn sä.
we „ „ „ „ Esqulqatl(E)tlta sä.

Negative Forms.

I am not sick, aúa-sEn Esqátlatl.
we are „ aúa-tlta Esqulqatl.

Interrogative Forms and Replies.

Are you sick? EsqátlatlEsōq?
(*Yes*) *I am sick,* Esqátlatl-sEn.
Is he sick? Esqátlatl-a tsāa?
(*Yes*) *he is sick,* Esqatlatl tsäa or, Esqatlatl kō tsáa.
There is nothing the matter with me, aúEna nEckwenētl.
I am often sick, ōīyās kw'sÉnEn Esqátlatl.

N.B.—In some of LEk·oñēnEñ dialects, the singular form of this word is qatl or sqatl. The form here given is clearly a duplicated one.

I am hungry, kw'tlkwē-sEn.
thou art hungry, kw'tlkwē-Esōq.
he is „ „ tía (or, tsáa ō nítl.)
we are „ „ -tlta.
you are „ „ Esōqhāla.
they are „ „ tsäa ō nEnítlia.
I am tall, tluk·tatl-sEn kō.
thou art tall, tluk·tatl sōq kō.
we are tall, tlāluk·tatl-tlta kō.
you „ nEkwélia tlāluk·tatl kō, or, tlāluk·tatl-sōq-hāla kō.

ACTIVE VERB.

It will be seen from the following that the copulative pronoun for this class of verbs has in the second person a totally different form from that used with substantive verbs.

Present Tense.

ctcut, *strike.*

I strike, ctcut-sEn.	*we strike,* ctcut-tlta.
thou strikest, ctcut-tcē.	*you strike,* ctcut-tcē-hā́la.
he, or she strikes, ctcut-Es.	*they strike,* ctcut-Es (tsäaōnEnítlia).

By adding kō to the above, we get the equivalent of the HalkōmélEm ē-tsEn-kwā́kwot, I am striking, thus:—

ctcut-sEn ko, *I am striking.*

By substituting kwa for kō we get the equivalent of the HalkōmélEm nē-tsEn-kwā́kwot, *I struck,* thus:—

ctcut-sEn kwa, *I struck.*

Past Tense.

Aorist.

I struck, ctcut-lā sEn.
we struck, „ tlta.
I was striking, ctcut-lā-sEn kō.
we were striking, ctcut-lā-tlta kō.

By prefixing ō to the above, we get another form, thus:—

ō ctcut-lā-sEn kō, *I was striking.*

This form may be called the Responsive Past. It is that commonly employed in answering questions.

Future Tense.

I shall strike, ctcut-sEn sä.
we shall strike, ctcut-tlta sä.

By adding ō and kō to the simple future, a secondary form is obtained. It seems to be used only in answer to questions: will you strike it? and may therefore be termed the Responsive Future. All the Salish dialects seem to use forms in reply to questions which differ more or less from those used in direct speech or statement.

Imperative Forms.

strike! hā́i-tcē-ctcut!
strike you! ctcut-tcē!
strike now! cṓtcēctcut!
strike you (plu.)*!* ctcut-tcē-hā́la!
let me strike it! tōq úsutōq ctcut!
let us strike it now! tōqḗ utlñíñEtl tōq ctcut!
„ „ „ tōqē utlñíñEtlta ctcut!

Negative Forms.

I strike not, aúa-sEn-ctcut.
thou strikest not, aúa-sōQ-ctcut.
he strikes not, aúa-ctcútEs.

we strike not, aúa-tlta-ctcut.
you strike not, aúa-sōQ-cutc't'hâla.
they strike not, aúa-ctcútEs.

Past Indefinite.

I didn't strike it, aúa-sEn-kwa-sēctcut.
we didn't strike it, aúa-tlta-kwa-sēctcut.

Past Definite.

I haven't struck it, aúa-sEn-sēctcut.
we haven't struck it, aúa-tlta-sēctcut.

Future.

I shall not strike it, aúa-sEn-sä-ctcut.
we shall not strike it, aúa-tlta-sa-ctcut.
thou wilt not strike it, aúa-sä-sōQ-ctcut.
you will not strike it, aua-sä-sōQ-hála-ctcut.

Negative Imperative.

don't strike it, aúa-sōQ ctcut'
don't strike me, aúa-sōQ cutc's.

Conditional Forms.

ấi kwE ctcut-En, *if I strike.*
„ „ -ōQ, *if thou strike.*
„ „ -Es, *if he, she strike.*
„ „ -Etlta, *if we strike.*
„ „ -ōQhâla, *if you strike.*
when I strike, kwEnEs kw'tl ctcut lā.
when we struck, kw'tl ctcut-lā-tlta-kō.
when we shall strike, kw'tl ctcut-tltā sä kō.

Desiderative Forms.

I wish I had struck it, ctcut-yuk-sEn-ala.
I wish we had struck it, ctcut-yuk-tlta-ala.
I wish I could strike it, nE-stle kwEnEs ctcut.
I wish we could strike it, nE-stlē kw's ctcut-tlta.

Interrogative Forms.

ctcutEs-ēyuQ ? *did he hit it?*
ctcutEs kō, *he did.*
ctcutEsōQ ? *did you hit it?*
ctcut sEn kō, *I did.*
ctcutEsōQ sä ? *will you hit it?*
ctcut-sEn sä kō, *I will.*

Iterative Forms.

ō-citcEtc-sEn, *I am repeatedly striking it.*
ō-citcEtc-tlta, *we are* „ „
ō-citctEs, *he is* „

Responsive Form of Same.

ā-tla-sEn ō citcEtc (yes), *I am repeatedly striking it.*
ō citc'tc'sōQ, *keep on striking it.*
ō ctcut-el-tlta kō, *we struck each other.*
aúa-sōQ citct', *don't strike it.*
ts'weñEt ē kwāat, *please don't strike it.*

Passive Voice Forms.

Accidental Action.

I am struck, citc-noñ-sEn.
thou art struck, citc-noñ-sōQ.
he is struck, citc-noñ-sE tsäa.
she is struck, citc-noñ-sE sa.

Purposive Action.

I am struck, ctcut-oñ-sEn.
we are struck, ctcut-oñ-tlta.

By prefixing ā-tlā to the above, another tense is formed, which may be termed the Immediate Past. Thus:

ā-tlā-sEn citc noñ, *I am struck.*
ā-tlā-tlta citc noñ, *we are struck.*

Past Tense.

Accidental Action.

I was struck, citc-noñ-lā-sEn kō.
we were struck, citc-noñ-lā-tlta kō.

Past Tense, Purposive Action.

I was struck, ctcut-oñ-lā-sEn kō.
we were struck, ctcut-oñ-lā-tlta kō.

Future Tense.

I shall be struck, citc-noñ-sEn-sä.
we shall be struck, citc-noñ-tlta-sä.
I shall strike myself (if I do that), citc-noñet-sEn sä.

Conditional Forms.

If I am struck, kwE citc-En.
If we are struck, kwE citc-Etlta.

Negative Forms.

I am not struck, aúa-sEn sécitc.
we are not struck, aúa-tlta sécitc.
I was not struck, aúa-lā-sEn sēcitc.
we were not struck, aúa-lā-tlta sēcitc.
I shall not be struck, aúa-sEn sä citc.
we shall not be struck, aúa-tlta sä citc.

Miscellaneous Phrases.

what is that? stañ yū ā́tcE?
a stone, tsE sñā́nit.
is it a stone? sñā́nit-a?
it is a stone, sñanit kō.
which stone? tuqḗin ā́tcE sñánit?
what kind of a stone? stañ ā́tcE utl sñā́nitEs?
a black stone, nEkḗEq sñánit.
is that a black stone? ō nEkḗEq-a kō tcE sñā́nit?
on a stone, utsá sñā́nit.
under the stone, klātcílawEtl utsā́ sñā́nit.
it is a good stone, ḗi kō sñánit.
one dog, nEtsēkwus (sḳā́qa).
two dogs, tcEsēkwus (sḳā́qa).
no dogs, aúena sḳā́qa.
dogs, sḳāláqa.
any dogs, muk·ᵘ skwEnḗñ sḳā́qa.
many dogs, ñuñ sḳáqa.
few dogs, aúa sñuñ.

right ear, tsī mEn.
left ear, tsukwáEn.
both ears, tsEátcan.
right eye, swḗmâlEs.
left eye, tsēkwā̃lEs.
both eyes, cwEtcā̃lEs.
right hand, sēimEláqEn, sēmḗkwuss.
left hand, tsEkwḗyōs.
both hands, sâtcḗōs.
right foot, saíalumsin.
left foot, tsÉkwasin.
both feet, tsEtcásin.
this house, tīa áloñ.
that house, tsā́a ā́loñ.
these houses, tīa äláloñ.
those houses, tsáa äláloñ.
I want some water, nEstlē kw's kwā.

N.B.—This word "want," "wish," "like," is one of the most constant of all the Salish terms. It has the same form in all the dialects examined, and is always conjugated with the pronominal forms nE, etc. It is perhaps the best test word of this linguistic stock.

I am thirsty, cácäsEn.
I want some food, nEstle kw's sétlun.
I am hungry, tlútcEsEn.
The moon will rise soon, tuQtcilel aiyúna kwän tsE tlskaltc.
who is that? nētl ā̃tcE san tsáa?
give me some water, Enátce kwākwā stóñis.
make up the fire, tcuk kō sÉsta.
one tree, snEts ḗEtltc' (skEl·álEnōq).
two trees, ustc's ḗEtltc'.
a small tree, usmémEn ḗEtltc'.
small trees, usmélEmEn ḗEtltc'.
lots of trees, ñuñ skElkEl·álEnōq.
all trees, muk·ᵘ skElkEl·álEnōq.
few trees, auskwEn ḗEtltc'âl skElálEnōq.
one house, nitsaútōq.
two houses, suñtōq.
many houses, ñuñ ā́lāloñ.
small houses (klaklōka, *small*), äá'loñ.
large house, tcukaútōQ, tcuk· ā́loñ.
large houses, tcuk ā́lāloñ.
a good man, ḗi swḗEka.

he is a good man, ḗi swḗEka tī ō nītl.
I am working, tcē-sEn kō.
he made it with a knife, ō cpílEtEn tEsQtcēs.
I am struck with a stone, ts'Étoñ-sEn utsá sñā́nit.
it is going to rain, tlāmoq yoq sä.
it is John's dog, tūQ *John* sḳā́qa.
we have some horses, tc'stḗEkēū-tlta.
my dog is white, kw's (or tcE) nE sḳā́qa puk·.
your dog is black, kw's(a)unsḳā́qa nEk·ḗaq.
come with me, Enā́tcE ésūwa.
bring me the dog, Enaúqtcē tEn sḳā́qa.
give me the dog, Eñastcē tEn sḳā́qa.
it is cloudy, EcQnaúwis.
are you hungry? k·wāiyisQ ?
I am hungry, k·wtl k·wā́iyisEn.
are you cold? tsātluñasQ ?
I am cold, tsātluñsEn.
did you shoot a deer? tcEtlunuk·asQ uk smḗyis ?
it is John, ō nītl kō *John.*
he said I was a bad man, aqun kwÉnis skäas swḗEka.
when you come in shut the door, ā́sQ Ená nūwēluñ ēnutkutQ sE satl.
these horses are black, tīa stéEkēū nEk·ḗEq.
those men are old, tsau nEnḗtlia sElā́lōq.
those girls are beautiful, tsäa kuñkuñitcal alē.
those women are ugly, tsau nEnḗtlia kulkulā́ma.
I have a dog, tc'sḳā́qa-sEn.
you have a dog, tc'sḳā́qa-swā.
you and I have a dog, mok·^{u} stukṓ tc' kwa sḳā́qa.
we have some horses, ōtc' stḗEkēū-tlta tukō
he has some horses, ōtc' stḗEkēū tō nītl.
my dog is black, tīa nEsḳā́qa nEk·ḗEq.
your dog is white, kw's unskwā unsḳā́qa puk·.
his dog is white, tīa (or kw'sä) ō nītl sḳā́qas puk·.
our house is old, kw'tl sálōq tī áluñ.
my hat is on the ground, tc' nEstcEsauk sE sauktE.
it is under a stone, tltcalawutl utsā́ sñánit.
it is in the box, EsnauwEtl utsá k·lā́iyakus.
near me, Estā́sEtl ā úsä.
a stone will sink in the water, tsa sñánit tl'EltcElñēstuñ sä utsá kwā.
come with me, Enátcᴇ ḗ sūwa úsä.
come home with me, Enátcᴇ tāk·^{u} ésūwa úsä.
go with him, QonētcE ēsū́wa Etsáa.
I will go with you now, yEsEnsä ésūwa unúkwa Étiau Qoñ.

I will go with you to-morrow, yEsEn sä ésūwa unū́kwa kwōkwā́itcilis.
I went with you yesterday, yÉla sEn kw'cuntil unū́kwa tcilakEtl.
let us go now, hḗista kw'tlyīatlta.
let us all go, héista yā́tlta ō muk·^{n} stíya.
let us go together, hḗista ō yEkwEntäl.
let us build a house, hḗista tcätcūtwuñ.
let us eat it all, ñasta ṓ muk·^{n}.
the moon is bright, nūqwaíyuñ sa tl·kEltc.
the day is clear, tía ánuk yaíyuñ.
it is fine, ḗi skwā́tcil.
he is making a fire, tcukwḗo tsā́a.
make up the fire, Qṓnatcɛ tcukṓsE.
light the fire, tcukṓsE.
give me the horse, Enauq stēkēū.
I can ride, Estcūát sEn untzḗluñ.
I can swim, kla sEn ko stcūat tuñoñ.
are you cold? tsā́tluñ EsōQ?
no, I am not cold, aúa sEn tsā́tluñ.
yes, I am cold, tsā́tluñ sEn kō.
is he sick? Esqatlatla?
he is sick, Esqatlatl kō.
are you hungry? kw'tletc EsōQ?
I am, kw'tletc sEn.
is your father dead? kw'tl k·wṓī yEkwE kwEn man?
yes, he is dead, äa, kw'tl k·wṓi kō.
is he coming? yEún-a?
are you coming? ā tla EsōQ ē yEún-a?
I often go there, ōyā́ kwÉnEs ā́auq.
come in, Enátcɛ nūwḗluñ.
go in, ā́auqtcE nūwḗluñ.
did you shoot a deer? tc' tlunúk·owus auk sméyis.
is it dark? ā-tlātcE?
yes, it is dark, tlatc kō.
is it light? stā́tō-ā?
yes, it is light, ō stā́tō kō.
I want you to go, nEstlē kw'sEn sía.
come along, EnátcE.
once he came to my house, ō-nEtsauq tátcil nE áluñ.
he often used to come, ō yā́la kō kw'sṓEnas.
when I came in, the man was lying on the bed, kwÉnEs tátcil tsō nītl sEsaút útsa cwā́mut.
when I went out I saw him there, kwÉnEs kw'tlía skéluñ ēyū́ kwEnétsEn sEsaút útsa cwā́mut.

when you come in shut the door, ā́sōQ nūwḗluñ ḗi nū́qtEkut tsā́asā́tl.

when you are sick you should take medicine, kwE EsqatlEtlōQ ḗi k·ū kwōkwanásiñōQ.

when it rains I stay in the house, ā́sa tlúmoq ḗyū usnā́wEtl-sEn sä uk·ᵘ 'stalEñōq.

when the deer saw me it ran away, nītl nE sō kwEnā́ñus sō kwā́niñuts tsá́a smḗyis.

would you not like some meat ? aúa Es-un-stlē tsā́a slḗuk ?

which is your horse ? nītl ā́tcE tEqḗin un-skwa tī́a stēkḗū ?

he stole my dog, ō nītl kō kánEs ú-kwE-nE-sḳā́qa.

he stole your dog, ō nītl ko kwänḗsa un-sḳā́qa.

my dog was stolen, ka nḗtuñsEn aú-kwE-nE sḳā́qa.

I lost my dog, Hwēl kō kwE-nE-sḳā́qa.

I cut my foot, tlētstsEsEn.

it is raining, tlúmōq.

it is snowing, tcēyukᵘ.

it rained yesterday, tlúmoq uks tcilā́kEtl.

it will rain to-morrow, I think, $\left\{\begin{array}{l}\text{ḗwa tcE}\\ \text{ḗwā kō}\end{array}\right\}$ tlúmōq sä kō kwā́tcilis.

if it rains I shall not go, ā́sā tlū́mōq ḗyū aúa-sEn sá.

where are you ? āqḗin kw's ē ā́tcE ?

I am here, ā́tla sEn kō.

where were you ? āqḗin lāswaā́tcE ?

where do you live ? āqḗin skwE ā́tcE ?

I live here, ā́tlā-sEn kō ō ā́tlā Etī́a.

I live there, lā-sEn kō Etṓlō.

he is in the house, ā́tlā tī ō usnā́wEtl áluñ.

where is John ? āqḗin yūq kw's ē ā́tcE kwE, John ?

he is on the beach, lā ā́tE sā́sau.

I am a Songish, soñEs-sEn kō.

he is crying, tsá́a ō nītl Qāóñ.

he is laughing, tsā́a ō nītl nEnaíyuñ.

did you go ? kw'tl yála-sōQ ?

no, I did not, aúa-sEn sīya.

yes, I went, ō yála kō.

he went, ō hai la ya kō.

yes, I will go with you, áa ko ḗsūwa sEn.

come along then, Enátce.

where have you been ? tuQḗn la swā́tcE ?

I have been for a walk, ō cútuñ-sEn ā́lā.

where are you going ? tuQḗn swā́tcE ?

you had better not go, ō auítcE.

I must go, ō yā-sEn kō.

I am going, yā-sEn.
won't you come with me? ā wā-sōQ Enā́ ésūwa.
stand up, sétliñ.
I am going, kw'tl nētl nEsyā́.
go! Qonētcē!
you had better go, yātcē.
I am not going to strike, ō aúa sEn sa ctuct.

Prepositional Phrases.

on the beach, sā́sō.
near the water, Estā́sEtl utsā́ kwā.
in bed, kw'tl ētEt.
on a stone, ts'āat utsā́ sñā́nit.
in the clouds, uskwā́kwa, cwāsítEn.
on the water, EskasEtl ā́tsā́ kwā.
in or under the water, klātcEtl ā́tsā́ kwā.
in the sky, sīsEtl utsā́ skwā́tcil.
in the canoe, ēlā́litl utsā́ snúkwEtl.
in the house, ēwusnā́wutl utsā́ ā́loñ.
outside, Esā́kEtl.
underneath, k·lātcílawitl.
on the ground, sE saút utsā́ tuñūq.
near or close to me, Enā́tcE Estā́sEtl.
sit by or near me, Enā́tcE Estā́sEtl kwEnz ā́mut.
come along with me, Enā́tcE ésōwa.
I am struck with or by a stone, klumatoñ-sEn utsā́ sñā́nit.
he struck me with a stone, ṓ nītl kō klumas utsā́ sñā́nit.

STORY OF SMÚTUKSEN.

Skwā́cin	utlsmEā́ntc.	"Enā́tcE	úña	uts	En-smā́nitc."	"Enā́tcī
Skwacin	was chewing gum.	(Said she)	"Give me some	of	your gum."	"Come-you

ésūwa	ā	kwāsEsEm	a kwícQilas	ñuñ	smā́nitc."	Nētl-sō	yās
with me	and	I show you	where is	lots of	gum" (said he).	Then	they went

k·wācúnEtEn.	nētl sō	"aqéin	ā́tcE	tE	cwólas	tE	smā́nitc?"	"Tūq
together.	Then (said she)	"Where	is	the	place of	the	gum?"	"Nearly

tcilā́latlta	étūs."	YE-kúmtEs	tE	sélekwus	tE	skēts.	nētl sō	ēyE-
there-we	getting" (said he).	She breaks off	the	fringe-of	the	blanket-her.	Then	she

kúlkutEs.	Sō	yās	ēcutuñ.	nētl sō	hais	tE	sélekwus.
hangs it on the limbs of the trees.	Then	they go	on walking.	Then	she finished	the	fringe.

Nētl sō tūq tcEkaíwuks skElukElánliñuq, tus utsä qätca, nētl sō kwálEs
Then she bent the boughs young trees, they get to a lake. Then spake

tE slēñ. Sō Enás ō tâtcil tluttlalē. "âlEtl-tcē." Nētl so âlEtls
the crane. Then there appears a shallow-canoe. "Get-in-you" (said he). Then they get in.

sō tákwEls; nētl sō tcañs tsäa Skwácin. Nētl sō "nūwēliñ-tcē."
Then they cross. Then they reach that Skwacin. Then "Go in" (said he).
the home of

Nētl sō nūwēliñs. Nētl sō qaitEñs nētl sō slēñistEns, sō
Then she-went-in. Then she-slipped-down then he picked her up, and

amât'Ens; nētl sō umuts tsäa Skwácin umuts slénli. Nētl sō
set her down; then sat down that Skwacin sat down (also) the girl. Then

kwálnūkwEl. Skwácin "Kwenāla uncwElākwa?" "âpEn-tlta"
they talked together. Skwacin (said) "How many your brothers?" "Ten-we" (said she)

tówa kwālkwEls tsau nEnētlia kw'tl-kwal tE slēñ. Nētl sō tE
awhile they talked they when cry out the crane. Then the

k·wéstEns. "Nētl unskw'kwa?" "Nētl" enâ nūwélEñ nētl so
canoe brings him over. "Is that your brother?" (he asks) "It is" (she replies) then he enters then

tcak·Es, nētl sō nuqtlkwEnkwastEñ tsātsálas, nētl sō tl'pútsEts.
he slips down, then (Skwacin) takes out the heart his, then he swallows it whole.

K·la kw'tl-kwal tE slēñ. K·la tâtcil tE nátsa klauaqEnátiñ.
Again cries out the crane. Again comes another one he does the same to him.

aiyū yaqEnátiñ. Aiyū auk·^{u} tsä âpEn. QEoñ sE
then does same to all (the brothers). Then finished the ten (of them). Crying the

tāns muk·^{u} skwátcil. Nētl sō kwÉnEts tsä k·utcī. Nētl sō tlíñas
mother-their every day. Then she took some moss. Then she took

tsä smútuksEn ē yEáqtEs útsa k·útcī, nētl sō muk·^{u} skwâtcil, nētl sō
some snot and put it on the moss, then every day, then

kwéuksEt, nētl sō k·wónEs tE sálEs ē tsä sqúna, sō kwónūq
it begins to-move, then she perceives the hand and the feet, then she sees

tsä kúloñ ā nä sō ālésEts. Muk·^{u} skwātcil tcē sEñs SmútuksEn.
the eye, then it becomes alive. Every day (growing) it grows into SmutuksEn.

Nētl sō yEyāsEñs. "Qutsésiñ-tcē kw's nāyétcut." Nētl sō qutēts tE
Then he plays about. "Make-me-you a shooting weapon" Then she made a
(said he to his mother).

cwōmátúñ ē k·la yētcut, 'nētl sō ctuñs. "Aúa-sōq lElēloñ, auk·^{u}
bow and also arrows, then he went hunting. "Don't you go far away, lost

un-cEcéEtl." Nētl sō tcuk swéEka SmútuksEn. "Stañ yūqatcE
your elder brothers." Then big man (was) SmutuksEn. "What kind of wood

kwE tlāaúq?" "ē aúa ō kō nuñúna ē-aúa atcE so éi kwEns-táat?"
may be hard?" (said he) "I don't know my-son hadn't you better try"
(answered she) (for yourself)

Nētl sō tā́ats muk·ᵘ swunḗñ ctcatl, wonā́i k·luñ-ā́tltc k·laaúq. SmútuksEn
So he tries all kinds of wood, only yew tree hard. SmutuksEn

Ectät tE tans: "EstañEs atcE ēsyā́s ō Qaóñ?" "Muk·ᵘ Qā́i uncwalā́k·wa.
asks the mother-his: "Why always crying?" "All dead your brothers and sister.

ēwa ātcE slalakum kwE-tcā́luk." Aúa skwāls ō lēlāniñāl. Nētl sō yās
may-be a monster lives in the woods." Not speaks he listens only. Then he goes

SmútuksEn stuñ qElqallEkwEts, nētl sō kwónūqs tE sEḗlekwus, nētl sō
SmutuksEn for a walk all armour-clad, then he perceives the fringe, then

yEtlEā́s nētl sō sā́ūs sō kwāls tE slēñ. "Nētl-a
he follows (the signs) then he reaches the lake whereupon cries out the crane. "Is that

uncwā́kwa sā́ū?" "TūQ aúina"; "ha! ha! skwāls tE Skwā́cin
your brother at the lake?" (said Skwacin) "None left"; (she answers) "ha! ha! said Skwacin

smEmátsEn, ḗi sä nE sḗtlEn." SmútuksEn ētcīā́wun: "ā́a sōQ sE ō
he is shoving off, fine will be my meal." SmutuksEn was singing: "No matter how

slalakum ḗwā úsEn sä ō tcilaúsa." SmútuksEn sō k·wēns. Sō
great a monster maybe I am shall turn you down." SmutuksEn then disembarks. When

tus' útsa sātl sō Qḗltes stauwok· Qḗltes nū́as nētl sō
he reaches the doorway then threw down clay he throws it inside (the house) then

nūwēluñs tE SmútuksEn, nētl sō kwḗntEls, nēlt sō nūqtlkwEnkwā́stiñ
he enters (does) the SmutuksEn then they fight, then he (the Slalakun) thrust his fingers into his heart (SmutuksEn's)

nētl sō tEltuks tc' sā́lic." "Kw'tlnētl aúEns Qonā́ñ?" nētl sō
then they break off his fingers. "Is that all you can do?" (said SmutuksEn) then

ctcḗakwutuñ tE Skwā́cin, nētl sō kwiskwan tE Skwā́cin. Nētl sō
he struck him on the head the Skwacin, then fell down Skwacin. Then

k·ā́ñi set SmútuksEn nū́qtltcäkut. "Muk·ᵘ nE-cwā́lakwa tsā́las
the maiden bade SmutuksEn cut him open. "All my brothers' and sisters' hearts

usnā́wEtl." Nētl sō nūqtltcakuts. tuq sanyuq ā̃tcE tsā́la tláa
inside" (of him, said she). Then he opens him, whose heart this one (he wonders)

EstanEtl ō nEnētlia Eskwā́kwai, ē-tlāmā́tEs, nētl sō halḗtEns.
he lays in a row those dead-ones, he fits each (heart), then he restores them to life.

"hēs-lā kō wā nicwḗtEt." Nētl sō tā́kūs, tcā́stcEsa kw's-tā́kwEls.
"Long-time have slept" (say they). Then go home, two-by-two cross they.

SmútuksEn ētl-kwā́wus kw's tā́tcwEls. Nētl sō k·w'tcā́tEns tE slēñ, nētl sō
SmutuksEn was the last to cross. Then he killed the crane, then

tultustiñ tlitlElā́i nētl sō tākūs, ḗi-skwā́lEkwEns sE taus.
he destroyed the ferry-boat then went home, rejoices the mother-their.

Nētl sō yās tcīā́tutl muk·ᵘ nEnḗtlia. Nētl sō kwuqEnuqwEls. "Nētl
Then went duck-hunting all of them. Then quarrel they together. "This is

nEskwa nE yétcut." "Aúa, nētl nEskwa." Nētl sō lat·l
my my arrow" (said one). "No, it's mine" (said another). Then the elder one

kwuqnuqwEl utl SmútuksEn. "NEccēyEtl nētl ō nEskwa nE-yētcut."
quarrels with SmutuksEn. "My elder brother, it's my my arrow"
(said SmutuksEn).

"Aúa-sōq tcētluñ utE-úsa, smútuksEnsōq." Nétl sō tātcuks, sō tākūs,
"Don't-you 'brother' me, you snotty-one." Then he becomes angry and goes home,

sō tcañs nētl sō étūts, ctlqaléEkwoñ. "Umut-tcē étlunsōq,"
when reaches home then he lies down, covers his face with the blanket. "Sit-up-you, get up,"

set sa tans, aúa skwals, tsä SmútuksEn, nētl sō tcáñit aúina,
said his mother, not he replies, that SmútuksEn, then she felt him and behold nothing was there,

nētl sō twésts ō twāí tsä smútuksEn. Hái kwE.
then she pulled back the blanket and lo! only that snot. Finished.

The Equivalent of above as told in English. By Thomas James.

There was once a family of ten brothers and one sister; they lived together with their mother. One day the girl went into the woods alone. She saw there a fine-looking man who was chewing gum. He made a great noise over it. Thought the girl to herself, "What is the man chewing? it must be some kind of good gum." She accosted the man asking him for some of his chewing-gum. Said he to her, "I have no more here, but I will show you where you can get plenty for yourself. It is only a little way from here." She followed him a little way and then questioned him again. "How long before we shall come to the gum." "In a little while now," he replied, "it is only a short way from here." But she is alarmed now, and fears he is taking her away, so she unravels her blanket and ties bits of the yarn to the branches of the trees she passes. Before they get to their destination she has used up all her blanket in this way. She now marks her course by breaking off the ends of the twigs and branches in her path. In course of time they come to a lake: as they approach a Crane cries out. He is watchman to the ogre who had enticed the girl away, and always gave notice of the approach of anyone by a harsh cry. When they reach the edge of the lake a little boat appears self-propelled without sails or paddles. It was the ogre's magic boat. The ogre now bids the girl get into the boat. He follows her, and they presently are carried to his house, the inside of which is as bright and dazzling as the sun. The floor is also bright and exceedingly slippery, so slippery that no one can stand upon it. "Go in," said the ogre to the girl, but no sooner had she set her foot upon the floor than she fell down and could not of herself get up again. The ogre now picked her up and set her upon a seat. He then asked, "How many brothers have you?" "Ten," she replied.

Now when the girl did not come home that night her brothers and mother were very anxious about her, and on the following morning the eldest set out to follow her track. He had no difficulty in doing this on account of the bits of yarn tied to the trees and the bent and broken twigs. In course of time he reached the lake and the Crane gave his warning cry. The little boat next appeared into which the young man stepped and was taken to the ogre's house. He stood at the entrance a moment and the ogre said, "Come in, my friend, you will find your sister here." The youth entered, but as soon as his feet touched the slippery floor he fell prone upon his back. Thereupon the ogre thrust his fingers into the young man's breast and tore out his heart and swallowed it. This done he set the dead body aside out of the way. The eldest brother not returning, the second set out in search of him and his sister. In due course he arrived at the ogre's house and met the same fate as his brother. In like manner each of the ten brothers setting out one after the other were decoyed to the house of the ogre and there done to death by him.

Now the poor mother was left without sons or daughter. She cried for many days. At last she took a bunch of moss, in the centre of which she placed some mucus from her nose. She watched this day by day; soon the mucus began to show movement, a little later a hand appears, then another and also the feet. Next she perceives the face and eyes. Then it becomes alive and grows into a stout boy baby. The mother now tends and cares for this new child, and he quickly grows into a big strong boy. "Make me a shooting-weapon, mother," said he. The mother complied, and furnished him with a bow and arrows. With these he would go out hunting. Before he went away his mother cautioned him about wandering too far off, telling him how she had lost all his elder brothers and sister. SmútuksEn was fast growing to manhood. One day he asked his mother, "Which is the hardest kind of wood?" "I cannot tell you my son," replied she: "hadn't you better try for yourself." So he tried all kinds of wood, and found the yew-tree best suited for his purpose.

Now his mother had not ceased grieving for her lost children and SmútuksEn often found her crying. "Why do you cry so much, mother?" he asked one day. "I cannot help grieving over your lost brothers and sister. I think they must have been taken by an ogre that lives in the forest." SmútuksEn listens to his mother's conjecture concerning the disappearance of his brothers and sister, but says nothing. He went out thoughtfully clad in his armour and presently came upon a piece of the fringe of his sister's blanket still hanging upon the bush where she had tied it. He looked about and saw the next piece, and thus found the trail his sister had left. He follows this up till it brings him to the Lake. When the Crane saw him it gave forth its croak of warning. Upon this the ogre, who had heard it, asked the girl if she thought that was another of her brothers coming to look for her. Replied she, "I have no other brothers." SmútuksEn now began to sing. "You may be ever so great an ogre but perhaps you will find your master in me." "Ha! ha!" laughed the ogre, "hark at the boastful puppy. What a nice meal he will presently make for me." Meanwhile SmútuksEn was crossing the lake in the magic canoe. Now he had brought some pipe-clay with him, and when he reached the doorway of the house and saw the slippery floor he threw some of this upon it. By this means he could walk over it without falling or slipping down. He now enters, and a conflict begins between the ogre and SmútuksEn. The ogre, as was his wont, thrust forth his claw-like fingers and tried to tear out SmútuksEn's heart, but he had found his match this time. His fingers broke off against SmútuksEn's armour. "Oh! oh " mocked SmútuksEn, "is that all you can do? take that for your trouble," and with that he struck him a great blow on the head which felled him to the ground. The girl, who had observed the fight, now called upon SmútuksEn to cut the ogre open. "He has swallowed all my brothers' hearts," said she. SmútuksEn cut the ogre open and found the ten hearts inside him. "I wonder whose heart this is?" he remarks as he pulls out the first. When he has taken out all the hearts he lays the bodies of his brothers in a row and fits into each the heart belonging to him. This done he restores them to life. "Dear me," says each, "I must have slept a long time."

They now set off home, crossing the lake two at a time. Last of all came SmútuksEn and his sister. When he lands he turns and smashes the canoe to pieces. He also kills the Crane. Soon they reach their mother's dwelling, and great is her joy at the recovery of her children.

Some time after this the brothers all go duck-hunting together, but when the shooting began they fell to quarrelling among themselves as to whose arrows brought down the ducks. The eldest brother claimed them, but SmútuksEn said, "O my elder brother it is not your arrow, it is mine." Thereupon the elder brother got angry and said to SmútuksEn, "Don't 'elder brother' me—you are not my brother; you are only a snot-man." This remark wounds SmútuksEn so deeply that he leaves the others and returns home alone. When he reaches the house he goes in and lies on his bed, covering himself entirely with his blanket. Presently his mother comes to him and bids him uncover himself and sit up, but she gets no response from him. Then she pulled back the blanket and behold he had changed back into nose-mucus again and was no more a man.

MEmHaías' GRANDSON.

There was once a chief named MEmHaías who had ten sons and one daughter. The latter after the custom of chief's daughters was a *clauñuñ,* that is, she led a very secluded life, rarely if ever leaving her father's dwelling during the day.

One night she was awakened by someone pulling her blanket aside, "Who's that?" she asks. Her visitor's only reply was a request to move over a bit and make room for him. He lay with her that night and she repeatedly asked who he was, but received no reply to her question. On several successive nights her unknown lover came to her, but she could never get him to reveal his name or tell her who he was. All she knew of him was that he possessed a fine head of hair.

In course of time the girl found herself with child, and was much distressed thereat by reason of the shame it would bring upon herself and family. She now set herself to discover the identity of her nightly visitor. To do this she took some deer fat and mixed it with certain ochres, and smeared the palms of her hands with the compound, and when her lover lay with her that night, she left an impress of them upon his shoulders. Now it was the custom of the youth of the village to engage in various athletic exercises in the early hours of the day, to perform which they always threw aside their blankets or tunics leaving their bodies bare. On the morning following the girl begged to be allowed to go out to see the young men go through their exercises. At first her mother refused her request, but finally gave way to her importunities, and allowed her to go well shrouded in her blanket. When the young men stripped for their contest, almost the first sight that met the girl's gaze was the imprint of a pair of hands on the shoulders of her younger brother. She is horrified at the discovery, well knowing the deep shame and disgrace that must fall upon her family. She returned to the lodge and all that day she sought to find some way by which she might spare her parents this dreadful disgrace. She could see but one, and that was for herself and brother to steal away quietly from the camp and hide themselves in the depths of the forest. So that night when her brother came to her, she told him of her condition, and that she knew who he was, and urged him to leave home with her, to spare their father the deep shame that his conduct must bring upon him if she remained till her condition was discovered. He consented to her plan, and they left the camp that night before anyone was stirring, and betook themselves to the forest and mountains. They travelled continuously for twice four days, then the girl said, "We will stay here and build a shelter for ourselves." This they did, and in course of time the girl was delivered of a fine male child. The child grew amazingly and soon became a strong boy. One day he was out shooting with his bow and arrows a little way from home when he saw a great fire in the direction of his parents' lodge. He hastened back and arrived just in time to see the roof fall in. He called aloud to his mother and father, but could get no reply. That night it was revealed to him in a vision who his parents were, what they had done, why they had left home, and how they had planned to wipe out their offence by self-destruction. He learnt also the name of his grandfather. The boy determines now to seek the latter. To this end he calls upon his totem the woodpecker, and asks his assistance. The woodpecker promises to guide him to his grandfather's lodge. The boy cuts himself a staff and the woodpecker perches upon the top of it, and they thus set forth. As they went the boy sang and cried alternately. The words of the song were, "Oh! my father and mother are burnt to death, and my grandfather is MEmHaías."

As he neared his grandfather's village, a woman who was gathering shell-fish on the beach heard his song and called out to MEmHaías' wife, who was sitting out of doors engaged in basket weaving, and told her that someone was singing in the mountain about her husband MEmHaías. The wife called out and told her husband what the woman was saying, and he bade her go down to the beach and listen for herself. She went down and the women said to her: "Look towards the mountain and listen." She listens and hears her grandson's song, "Oh! my father and mother are burnt to death, and MEmHaías is my grandfather." The old woman now calls her husband to come down and hear for himself. The day was very fine and still, and the sounds carried a great way. He goes down to the beach and listens, and presently hears his grandson's plaint. MEmHaías now calls his friends to listen, and they decide to go up the mountain and seek the singer. After some time they come upon him, and find that he travels in a very singular manner. He takes but one step to each repetition of his song, and it thus takes them fifteen days to get him down the mountain. When he arrives he tells his story and what he had learnt in his vision; and the mystery of his parents' sudden disappearance from their home was thus made known to his grandparents. They sorrow much over the sad end of their son and daughter, and send out a search-party to see if by any chance they had not perished in the fire. But no one could get near the spot where the house had stood, the fire had spread itself for miles on all sides, and was still fiercely burning, and nothing was ever afterwards heard of the unhappy pair who had thus deliberately planned their own death to wipe out the disgrace of their lives.

This story recalls one which I gathered some years ago among the Thompsons of the Interior, but is less graphic and much shorter. I am not disposed to think the LEkúñEn version is derived from the Thompson. Each I think is independent of the other and both equally interesting as exhibiting the shame and disgrace of incestuous unions.

MYTH OF THE GHOST-LOVER.

Once a long time ago the SoñEs made a successful raid upon the Síciatl, and returned to the island with many heads, which they stuck upon poles set up in the village. Now it happened that the daughter of the chief of the SoñEs was passing by where the heads were set up and looking upon them compassionately observed that one was the head of a very handsome young man. She was moved to take this head down and cry over it, caressing the beautiful long hair as she did so. For twice four days she daily fondled and cried over this head. At the end of that time some one came to her couch that night. She asks, "Who are you?" and received the reply, "It is the man whose head you have been fondling and crying over." For several successive nights her ghostly visitor appeared to her in this way.

One night he said to her, "To-morrow night I am going to take you away with me to my old home; I have a brother who lives there, who is just like me. When you arrive at Síciatl climb the mountain and you will see a lot of mountain-goat wool which you must make into blankets. I will be with you all the time till you meet my brother, whom I want you to marry." About the middle of the following night the ghost-man came to her bedside and said, "If you are ready, come." She got up and followed him out of the house. On the beach was a canoe with many paddles in it. Said the ghost-man, "Get in and cover your head with your blanket" The girl does as she is bidden, and hears nothing but a succession of "Ohs! Ohs!" Not a sound of paddling does she hear, and before she is aware of it the canoe has neared its destination. The ghost-lover now bids her uncover her head and get out of the canoe. "This," said he, "is where my brother lives." They climb the mountain and she finds quantities of wool. This she gathers and prepares and makes into blankets. Every morning she finds the carcase of a goat close by the shelter she had made for herself. She stayed here on the mountain spinning wool and weaving blankets for a whole year. At the end of that time one day she met a young man. She looked at him closely and saw that he was very like her ghost-lover. "This must be his brother," she said to herself. She hung her head and began to cry. The youth said nothing and presently left her. He goes home to his mother and says, "I met the finest woman I have ever seen this morning on the mountain. I wish you would get her for my wife. When you ask her, tell her I am the young man she saw this morning."

The parents of the youth went to see the girl, and found her busy weaving her blankets. The mother opens the conversation by asking the maid if she remembered seeing a young man lately. She answered, "Yes, I saw him." "He is my son," said the old woman, "and he wants you to be his wife." "I will go with you," replies the girl remembering her ghost-lover's wishes. They descend the mountain together. When they arrive at the old people's dwelling, they ask her how she got to their part of the country. "I was brought here by the ghost-people," said she, and thereupon tells them her story. When she speaks of the strong resemblance between their son and the head she had fallen in love with, they cry out and say, "Alas! it was our son his twin brother." The father then says, "I will send you back to your people with my living son, but we must first find some one who knows the way." He thereupon calls in the Elk and asks, "Do you know the whole country round?" "No," replies the Elk, "I am acquainted only with open glades." He then calls in the Deer, and puts the same question to him. The Deer replies, "I know parts only of the country." The old man then called in one animal after another, but no one of them possessed the necessary knowledge, till he came to the Mink. Mink replied to his question, "Yes, I know all the country, and I know, moreover, this girl's father's name. He is called Miñqaias."

The old man now sent for the store of blankets the girl had in her mountain home. There were many bales of them, far too many to put into their canoes. So he ordered them to make a great raft by means of their canoes. Upon this he placed the bales of blankets and then set out with his son and daughter-in-law and friends, with Mink to guide them.

They follow the coast till they reach the country and settlement of the Sk·qómic. Here Mink calls aloud for Miñqaias. They learn that no such person lives there and proceed on their way again till they reach the settlement of the MuskQiam, at the mouth of the Fraser. Mink calls aloud for Miñqaias here, also, but is told no such person dwells there. From MuskQiam they proceed to the settlements of the StcwắsEn, and from thence to Semiahmoo Bay, but meet with no better success. In none of these places lives Miñqaias, the father of the girl. Next, they call at the settlements of the Tlumi. Here Wolf comes out and says, "You have called at the wrong place. If to-morrow morning you will follow the sun you will come to Miñqaias' country."

On the morrow they follow the course of the sun, and at dusk they come to a mountain called Skắlakcum. Here they wait till the moon rises, when they follow it throughout the whole night. At sunrise they approach a village and Mink calls out as usual for Miñqaias. Now, there was a woman on the beach gathering cockles, who, when she heard Mink calling for Miñqaias, leaves her cockle gathering and runs to Miñqaias' dwelling and informs him that some people on a large raft are calling for him.

When Miñqaias hears the woman's words, he bids his people prepare themselves for war. Said he, "They may have come to fight with us." Miñqaias and his people placed themselves in readiness, and would not go near the raft. When the girl saw that her father feared treachery she stood up and called aloud, "I am Miñqaias' daughter; I have returned and brought my husband and his friends with me." When Miñqaias hears and recognises his daughter's voice, he cries out for joy, and bids the people go down to the water and bring the raft with its contents into his house.

This they do, but so large was the raft that they had to take down the side of the house to bring it in. The girl now relates her adventures and all are greatly astonished at her story. Miñqaias entertains his guests royally for several days. He also inquired of them how long they had been coming, and learnt that they had been two moons on the way. The father of the young man asks Miñqaias if he cannot show them a shorter way. Miñqaias promises to do so, and says he will ask his brother who lives in the sea.

The name of this "brother" is Stĕ́qwi. Miñqaias goes to the top of the mountain, and calls out to his brother of the sea. The latter replies and asks what he wants. Said Miñqaias, "If I want to pass quickly from one end of the island to the other, how can I best do it?" "I will tell you," replied Stĕ́qwi. "Whenever you want to travel on the water take the course of the current. This goes in one direction for half the day and in another for the balance of the day." Miñqaias thanks his brother, the Stĕ́qwi, for his advice, and returns to his guests. He then calls to him all the animals and asks them if they know the way to follow the ocean currents, but none but Sea-lion knows, and he requires much food to eat on the way. Miñqaias calls upon his brother again, and asks him to supply them with food for Sea-lion. Stĕ́qwi promises to send the salmon along with them. Next morning the visitors bid Miñqaias adieu, and set off under the guidance of Sea-lion. Presently they strike the current and find the Salmon travelling with them. Sea-lion and his people have, therefore, plenty of food by the way. The current carries them to a small island near Sechelt Bay. Here Sea-lion rises to the surface with the towing line in his mouth, and informs them that they are at home.

For this reason the sea-lions of to-day always travel by means of the ocean currents, and the Indians say that objects drift from the island to the mainland and back again, by regular and periodic currents: and they believe these currents were caused by Stḗqwi, the "brother" of Miñqaias, as related in this story. They further say that this intermarriage of the SoñEs maiden and the Síciatl youth in the manner related, was the origin of the peace and friendship which have existed ever since between the two peoples.

STORY OF SqấlEkEn.

There was once a boy who had three uncles. The name of the eldest was Tl'tākEltūq, that of the second, Tl'tōqElấnuq, and that of the youngest, Ts'kwímEt. Whenever his uncles gave a feast this boy disgraced them by licking off the platters and dishes like a dog. This habit made the people laugh at him, and brought shame to his uncles. Said the eldest to the others, "What can we do with such a nephew? I will kill or drown him." "No," said the youngest, "you must not kill him. You had better punish him in some way." The eldest uncle then took a handful of cedar tips, and rubbed the boy's face till the blood came. "Now," said the youngest uncle, "if you take some of the prickly dust of the white pine and fill his eyes with it you will punish him well." One of them objected, saying, "Why do that? You might as well kill him outright as blind him." Replied the youngest uncle, "I don't agree with you; one can never tell what might happen; perhaps something good may come of it." "All right," now say the others, "do as you say."

Upon this they fill the boy's eyes with the prickly bark dust, and take him into the mountains, and leave him there. The boy, thus left to himself, wandered about for four days. At the end of that time the eldest of the uncles went out one evening and was startled to see flashes of lightning coming from the direction of the mountain where the boy had been taken. Said he to the others, "I have seen a strange thing; I saw many flashes of lightning coming from the direction of our nephew; lightning at this time of the year is very unusual; I wonder what it means?" All the uncles now go outside and sit and talk and watch the lightning. Presently the youngest said, "I had better go and see what this strange thing means." He went to that part of the mountain where the boy had been left. As he approached his nephew called out to him: "I see you coming, uncle, don't come any nearer to me or you may be harmed. Swṓwas, the Thunder-being, took away my blind eyes and gave me new ones instead, and these flash the lightning you have seen. I want you now to make me a house without any roof: make the walls of new mats (sālā̆ts) which have never been used before." The man returns to his brothers, and tells them what he has discovered.

The uncles now feel proud of their nephew and his mystery powers, and forthwith build him the house he asks for. The boy's face shines and gleams like fire, and whenever he opens his eyes they emit flashes of lightning.

When the uncles have finished the house, the youngest of them went to the mountain, again, and told the boy that it was ready for him. "Very well," said the youth, "but don't take me till the evening."

That evening the uncle conducts him home again, the nephew keeping his eyes closed the whole time. As soon as he is within his house, he opens his eyes and the lightning flashes through the roofless dwelling into the upper air.

The nephew now instructs his uncles to go and tell the people what has happened, and bid them come and learn what his name for the future would be. The uncles did as they were bidden, and called together all the people of the SnEnaímoq, Pentlatch, and neighbouring tribes. When the people had come together and stood round about the new house feeling much afraid of what might happen, they saw the lightning flashes in the air and heard a voice as it were from the clouds, singing "Sqā́lEkEn!" This was the new name of the youth. Sqā́lEkEn now asked his youngest uncle, "Which is the highest mountain you can see?" The uncle replies, "CÉlsip." "Take me there," said the youth. They go to the CÉlsip mountain, but it is not high enough. The mountain on Salt Spring Island seems to them to be the highest and they go there. "This will do," said the nephew. The uncle now builds another house on the summit of this mountain and digs a well for water. The youth looks all round him and sees a small bay in the distance, the sand of which was formed of broken clam-shells. Said he to his uncle, "Do you see that beach yonder?" "Yes," said the uncle. "Go there then, and fetch a canoe load of that shell-sand." The uncle did as he was bidden, and when he returned with it, his nephew instructed him to put it into the bottom of the well to line it. The uncle did so and the sand may be seen there to this day on the top of the mountain.

Now the youth possessed a big hat, and when he desired a wife he would not go for her himself but sent his hat with his uncle, who said, "Sqā́lEkEn's hat wishes for a wife." In this manner he acquired many wives whose fathers kept him and them supplied with food, carrying it to the house on the mountain.

Now it happened that another man with mystery power, SwítEn, by name, lived at that time on the Chimaínus River, and one day Sqā́lEkEn sent his hat to him. Said SwítEn to his messenger, "Who is this upstart who sends and demands gifts of me? I am SwítEn En Skwail, the heaven-born: for whom does he take me? If he wants anything from me, why does he not come himself like a man, and not send me his hat? Go back and tell him that I don't want his hat, I want to see himself." The messenger returns and reports. "Oh," says Sqā́lEkEn, "he wants to see me, does he? Very well, I will go, but I think he will be sorry." All the people round about that part of the country now came together to see the meeting of Sqā́lEkEn and SwítEn. They filled the house of the latter. Sqā́lEkEn arrives, his eyes flashing like lightning all the way, but SwítEn lies on his back on his couch and says nothing. The visitors speak to him, and say, "What are you going to do ? SqālEkEn wants your daughter to wife." But SwítEn pays no heed to them, but continues to lie on his back. After the people had pestered him a good while he arose and said, "If SqālEkEn wishes to be on friendly terms with me, let him keep his eyes closed. I have power as well as he, and can do him hurt if I wish to." SqālEkEn thereupon closes his eyes and makes no display of his powers. SwítEn then gives him his daughter, and SqālEkEn returns to his mountain-home with her, and waits for SwítEn to bring him food, as the fathers of his other wives had done. He waits day after day until a considerable period had gone by, but no SwítEn appears. He gets tired of waiting and bids his wives dig some lúkumas roots. Said he to his new wife, "I will go and see my father-in-law ; something must be the matter with him, I think. You prepare three canoe-loads of gifts." They set out to go to SwítEn's, and on the way meet him on his way to the mountain-house of SqālEkEn. "Hallo," says SqālEkEn, "I was coming to see you, father-in-law." SwítEn replies, "I think you had better turn back again." "Oh no, I won't do that," said SqālEkEn, "you go back." Each then tries to persuade the other to turn back, but neither would yield, and in the end, to get over the difficulty, each agrees to return to his respective house. Now the "power" of SwítEn was the west wind. They had not long separated when a great storm arose, and rain-drops fell as big as a man's fist. Said SwítEn to his people, "I'll teach that man a lesson ; paddle me to the land." When he is landed SwítEn jumps into the water and splashes and tumbles and dives, singing all the while his magic wind song. The wind rises higher and higher, and the trees are broken and dashed to the ground, and their scattered branches fill the air. Presently the storm reaches SqālEkEn and overwhelms his canoes, and he and his company are obliged to swim ashore. When they get home the youngest of the uncles says to the others, "Brothers, I am astonished at the manner in which SwítEn has treated our nephew ; he is certainly the more powerful man of the two ; our nephew will now be shamed in the eye of the people. They will be exceedingly angry, and will probably seek to kill him, and so disgrace us and our children. I think we had better put him out of the way ourselves and so avoid a public disgrace."

They listen attentively to his remarks, and the eldest replies, "But how will you kill him ? You can't club him to death, his glance would burn you up." "Oh, leave that to me," answered the youngest, "I know what to do." He thereupon began to kill a number of hair-seals. The brothers then give a great feast, and call all the people together. The flesh of the seals is roasted, and distributed among the guests, among whom was SqālEkEn himself. The uncle who had undertaken to kill him now instructed the others in this wise : "I will presently go behind SqālEkEn and throw a seal-skin over his face, and then while his eyes are covered you must rush forward and club him to death. Get a stick of hard wood, and use it for a poker."

In the meantime SqālEkEn lay upon his bed with averted face. When they were ready for the deed Ts'kwímEt said to his eldest brother, "Brother, stir the fire with your poker, it is going out, I think." The eldest brother took the poker-stick, and made as if to stir the fire, and at the same time Ts'kwímEt threw a sealskin over the head of Sqā́lEkEn, and before the latter could throw it off and use his eyes, the other brothers had brought the poker down upon his head and brained him.

When the people perceived that Sqā́lEkEn was killed, they shouted for joy, so greatly had they dreaded his terrible powers, which even in his death had not wholly left him. In burying him they had to use the greatest care that no part of his body was left uncovered; the exposure of even a finger or toe resulted in grievous thunder and lightning. After his corpse had been disposed of, the fathers of the various brides came and took them away.

MYTH OF NEMṒKIS AND THE TEN BROTHERS.

There were once ten brothers living in a Sīyā́lek·^{u}. They were very big strong men. Besides the ten brothers there were many other people in the village, which was situated on a small rocky islet. Every morning the sea-lions used to go there to bask in the sunshine. The people used to try and capture the lions, but only the ten brothers were ever successful. This made the others jealous of the brothers, and one old man plots to bring trouble upon them. He went to the woods and shaped a sea-lion from a block of cedar, near by a small lake. When he had fashioned its exterior, he took some leaves of the salal-berry bush to form its liver, some moss for its fat and its fur, and cedar boughs for its beard. This done, he made a strong "medicine" from certain herbs, and with it washed the cedar-lion all over, and then placed it in the lake. Presently it became alive and swam about, but it could not dive, it was too buoyant. So the man drew it ashore, and put some stones inside to make it heavier, and then bid it try to dive again. This time the creature was able to dive as well as swim. The old man now instructs it in this wise: "From this lake to the sea there is an underground passage; you must dive down and come out on the open sea. You will see my village there on a small islet. When you reach it, mingle with the other sea-lions and lie and bask on the shore with them."

In the meantime the ten brothers had heard of the work of the old man, and had made up their minds to destroy his cedar-made lion at the first opportunity. With this intention they started out one morning to spear sea-lion. Said the eldest to the others, "I will certainly smash it if I see it. After all it is only wood, and I can smash it easily." Presently they perceive a large sea-lion on the rocks. "Ah! that is surely it," said the eldest. "All of you give me your spears and I will do the spearing."

When the cedar-made sea-lion perceived the brothers coming he made for the water, but before he had time to dive, all ten spears were sticking in his hide. He rolls over and pretends to be dead, and floats away seaward. Now to the point of each spear a line was attached, and that of the second brother adhered mysteriously to his hand. He cries out and asks what he shall do, shall he cut it. The others all reply "Yes." But he is unable to do so, and is being dragged out to sea in his canoe by the floating body of the sea-lion. The others follow in their canoes, and the youngest bids each man use his "mystery" powers to the utmost to save their brother. But not one of them has power to stop the floating carcase and release his brother's hand. The youngest then said to the others, "I will try what I can do; take up your paddles and whip the water with them, and sing your songs." But the youngest can do no more than the others, and they follow their brother northward for several days till they come at last to a mountain in which there are many sea caves. Here the mock sea-lion stops and lets go of the line which he had been holding in his flipper up to this time, whereupon the line left the man's hand, and he was free from it. The magic creature now entered one of the caves, and the ten brothers, not knowing what else to do, followed it in. Said the eldest, "We can never find our way back alone, we have been travelling day and night for a long time now, we had better see what is in this cave." So all ten of them enter and follow the sea-lion.

When they are well within the caves they come upon a number of women and children, and some of the women have no clothes on. They have skins which they put over their heads, but are unable to draw them down lower than their breasts till they enter the water. They are the wives and children of the sea-lions whose home is in the sea caves. Presently the chief of the Sea-lion came forward and said to the mock-lion, "You should have sent word you were bringing strangers with you." He replied, "I did not know they were following me." The chief was much perplexed, and did not know what to do with the ten brothers. One of the elders suggested that they should send them home to their own country, and let five of the young men show them the way. The chief now turned to the brothers and asked the eldest where they had come from. "From the south country," he replied. "If I send five of my young men to take you home, will you go with them?" the chief asks. The brothers say "Assuredly." "But," said the young sea-lions, "five of us cannot drag ten canoes." "Will you put aside five of your canoes?" They consent to do this, and forthwith five of the canoes are ripped up the middle and the paddles set upright in the cracks. These the sea-lion people turn into killer-whales, the paddles becoming the large dorsal-fin.

The chief then warns them to avoid the point of the island. "The monster Nᴇmókis," said he, "lives there, and he is always on the look out for sea-lion. If he sees you he will come out into the water and kill you. Make a wide detour at this point, and so avoid all risks." The five young sea-lions now take the canoes in tow across the gulf. When they near the point where the monster Nᴇmókis dwells, the eldest of the brothers says, "I am going to see this Nᴇmókis and try and slay him. Let us go in closer." As they are near their own country, the sea-lions now leave them, and the brothers paddle their canoes towards the point where Nᴇmókis had his home. As they drew near, Nᴇmókis perceived them and came down into the water towards them. The brothers cast their spears at him but they fall back from his body as if they had been thrown against stone. Presently the monster reaches them, and picks up the five canoes and carries them in his arms to his house. Now, for wife, Nᴇmṓkis had a small urine vessel called Cwēála, and whenever she wanted to draw Nᴇmṓkis' attention she would scream. This was the only sound she could make.

Nᴇmṓkis kept the ten brothers in his dwelling, and it was her task to warn him if his captives sought to escape. But the brothers were unaware of this at first. The eldest planned to escape. Said he to the others, "Let us cook a lot of food when Nᴇmṓkis is away hunting, and when we are ready we can load the canoes with it and get away." So they prepared as much food as they thought would be necessary to serve them till they could get home. When it was ready they seized an opportunity when Nᴇmṓkis was out elk-hunting to carry it to their canoes. But Cwēála began to scream and Nᴇmṓkis came striding back with his long strides and took the brothers from their canoes before they had gone a hundred yards, and carried them back to his dwelling again. Several times they thus thought to escape in Nᴇmṓkis' absence, but each time Cwēála gave the alarm and brought Nᴇmṓkis upon them. After the first attempt when Cwēála screamed they rushed back to the house before Nᴇmṓkis could see them, and when he came in he would question them as to the reason of his wife's screams. As she could not talk they made excuse each time. One time they said they had put too much wood on the fire, and made the house very hot and alarmed her. Another time they had let the fire go out, and she screamed to call attention to the fact; and so each time they had a new excuse. They now saw it would be impossible to get away while Cwēála was about or could see what they were doing. So they took some stones and covered her up, and then set to work to cook a fresh supply of food. When this is ready one of the brothers suggests that they should smash the urine vessel. They agree, and stealing up quietly behind it, they cast a great stone upon it and crush it, and the blood begins to flow. They then rush for their canoes and paddle off as quickly as they could.

At sunset Nᴇmṓkis comes home. He perceives the stream of blood at once, and flies into a great rage. He shakes the earth with his stamping and raving, and rushes into the water to overtake the canoes. He almost reaches them before the water is too deep for him. In his anger he seized great masses of rock, and cast them at the canoes. But the brothers happily escaped him. He ceased not to throw the rocks about for a long time, and they fell all over the country, and that is the reason why so many boulders are now seen scattered over the land far from their mountain sources.

MYTH OF THE MAN WHO CHANGED HIS FACE.

There was once a young man who fell in love with a maiden, but she repulsed him, telling him he was not handsome enough for her. This grieved and hurt him, and he went to his grandmother to learn how he might improve his looks. The old woman instructs him in this wise. "Take some deer fat and red paint and go into the forest and follow the trail to the prairie beyond. In the centre of this prairie you will see a column of smoke rising. Go towards this and you will presently come to a lodge. This is the home of the Face-maker; he will give you a new face for your old one if you ask him." The young man set out to seek the home of the Face-maker, and after many days' travel arrived at the edge of the prairie his grandmother had spoken of. It was about mid-day. He sees the smoke in the distance and makes towards it. When he gets close to the spot, he perceives that the smoke is coming out of a small hole in the ground. He looks down the hole and his body casts a shadow below. Within the underground house was a man who when he saw the shadow cried out: "hep! hep! hep!" He thought it was a cloud passing over. The youth looks down a second time and again darkens the interior. "That's a strange cloud," thinks the man and looks upward and perceives his visitor.

"Hullo! is that you?" he calls out, "Come down." The youth begins to climb down. The floor seemed far below him, but as soon as his feet were inside, the floor came up to meet him. The old man now asks him what he had brought. Said he, "I have this fat." "What else have you got?" "I have also this red paint." "All right," said the old man, "give them to me and choose your face."

The youth looked round the place at all the faces but found none to his liking. Said he, "I don't like any of these I see, haven't you some more?"

The old man then opened a chest and offered its contents to his visitor. The latter looked them over but found nothing to suit him there. Said he, "I don't like any of these either." The old man opened his last chest in which he kept his best faces, saying as he did so, "How will these suit you?"

The young man saw amongst them a face that pleased him, and said, "I will take this one." The Face-maker now removed the youth's own head and replaced it with the one he had chosen. When this was accomplished he instructed the youth thus: "When you return to your own country be careful to keep away from yonder mountain. A witch woman lives there who devours everyone she gets within her clutches. No one ever escapes her if they go near her abode. Her name is Zōhắlats; be careful of her." Now the young man was a great runner, and he despised the advice of the Face-maker, and went near the mountain trusting to his fleetness of foot to save him if the witch sought to seize him. As he passed he heard a voice say, "Come back to me, my husband." He looked behind him and saw a monstrous woman as tall as a tree coming after him. He took to his heels, but in a few strides she caught up with him and seized him by his belt, his feet dangling on one side and his head on the other. Thus she carried him to her dwelling.

Now she kept as slave a handsome young woman whom she had caught, and as she entered she said to her, "TcīEtQEn, look at my new husband; isn't he a fine young man." The youth sought every opportunity to escape but found none. Every night he slept between her huge breasts, and if he tried to steal away she awoke in an instant, and grasped and placed him in his place again. She kissed and fondled him for a while and then after her manner swallowed him whole. It was now his turn to be avenged, and he took her heart in his hands, and squeezed it till she cried and rolled in agony. Not knowing the cause of her pain she sent for all the animals to come and try and heal her. She asks of them: "Which of you is the best doctor." Blue-jay, who was a *seúwa,* claimed the distinction. He sang his "medicine-song" over her, but as she got no better he remarked to the others, "I don't think we can cure her, I think she will die." But *Smókwa* the Crane said, "Here, let me try what I can do? all of you beat time to my song with your sticks." "All right," said Crow, the spokesman of the crowd. The Crane then put his long bill into the stomach of the witch, which, the youth perceiving, caught hold of and firmly held. The Crane tried to withdraw his bill and struggled with all his might. Presently the youth let go, and the Crane fell back with such force that he turned a complete somersault. He knocked all the breath out of his body, and lay on the ground a moment to recover. Said first one and then another, "How was it Crane could not pull out his bill? It can't be just a sickness, I believe there is somebody inside of her." All this time the witch is crying and rolling with the pain, and presently she expires. The slave woman now says to the people, "Cut her open, there is a man inside of her."

They cut her open, and the young man comes forth alive.

The woman now takes possession of all the witch's property, which was immense. With the help of the young man she makes a raft and places all the property upon it, and together they float down the river to the salt water where the father of the young man lived.

The latter had been missed, and all his friends had wondered where he had gone, and were now much astonished to see him return with a handsome young wife and a raft full of property.

When the maiden whom he had formerly wooed saw him, and how handsome he had grown, she desired now to become his wife. But he rejects her in the same manner that she had rejected him, and tells her she is not handsome enough for him. She learns now how he had got his handsome face, and determines to go and get hers changed. She accordingly set out and in due time arrived at the Face-maker's home and requested him to change her face. He did so, but gave her a head with a frightful countenance so that she became hideous in the extreme. Thus was she punished for the rejection of her lover.

STORY OF CWOT THE SISTER OF RAVEN.

Raven once upon a time went to pay his sister Cwot a visit. She welcomes him, and he bids her call in her children. She goes outside and plucks a spray of blackberry bush and returns to the house with it. She planted the spray in the ground and began to sing. Thereupon the spray blossomed forth and berries appeared upon it. Cwot collects them in a dish and sets them before Raven. He is much gratified and eats his fill of them. After his meal he leaves, telling her as he goes that she must come and see him soon. She promises that she will do so. Some little time after she went to see him. When she arrived Raven very unctuously bade her welcome. "Come in, come in, dear sister, I am so glad to see you. You will have some dinner with me. What will you have, blackberries, raspberries, salmon berries, or any other kind? I have them all, so take your choice." She replies, "Oh, it doesn't matter what kind; serve me with any that you like." "Very well," returns he, and goes out and plucks, as he had seen her do, a spray of blackberry bush. He brings it into the house and sticks it in the ground and begins to dance and sing. His neighbours hear him and say: "What's up with Raven? listen to him fooling." Cwot, too, was greatly amused at his antics, and endeavoured to hide her face in her hands to prevent his seeing her smiles. Raven sung and danced a long time, but the berry-spray bore no fruit nor made any growth. After awhile Cwot said to him, "Brother, stand aside and let me try. You don't seem to have the power." Raven was very glad to be relieved of his task. Cwot now sings her mystery song three times. It sounded to him like the song of the "berry-bird."

Immediately the bough began to grow and bloom and the fruit to appear and ripen. "There," said Cwot, "now eat your fill; I don't want any." Raven greedily ate of the berries and took no notice of his crying, hungry children who also wanted some. While he was stuffing himself someone came to his door and said, "There's a man here who wants to see you; his name is Skwináuq, and he has a lot of halibut for you." "Oh dear," says Raven, "I'm in for it now. Where is he?" "Out on the water." Raven flies over to the man's house and goes inside. "Hello, brother," says the man, "you have got here, have you? Come inside and sit down and I'll get you some dinner." So saying he took a halibut hook and removing one of the boards of his floor took up a splashing, live halibut. Raven looked on with greedy eyes and said to himself, "I'll kill this fellow and get all his supplies." Skwináuq placed the halibut before Raven, who ate greedily of it, pondering in his mind the while how he might dispose of Skwináuq. Said he to Skwináuq, "You have treated me very handsomely. Your fish was very fine. I should like to make some return to you. Let me carry you all round the country and show you many things you have never seen. Get on my back and make yourself easy. Don't be afraid of looking down. I'll see that you don't fall off."

Skwináuq got upon Raven's back, who flew into the air with him as high as the top of the highest mountain. The height was so great that Skwináuq could scarcely see the land below him. "Now look down," said Raven, "and see what is below you. See that curious object just below?" Skwináuq was afraid at first to look below him, but Raven encouraged him, saying, "Don't be afriad, let go of my neck with one hand and look over the side." Skwináuq loosened his hold of Raven's neck and looked downwards. As he did so Raven suddenly turned over in the air and cast Skwináuq into space, saying as he did so, " There, go down and see for yourself and stay there for ever."

Raven now flew back to the Skwináuq's house, congratulating himself on the skilful manner in which he had got rid of the fish-man. When he got into the house he took a line-hook as he had seen Skwináuq do, pulled up a plank, and then cast it into the water. Instantly he felt a jerk upon the line and began to pull it up. He experienced great difficulty in doing this. Said he, " There must be a very big fish on the hook." Pull as he might he could not bring it to the surface, it always managed to get under the planking. Presently Raven kneeled down to look under the plank to see what was the matter. As his head came near the water something clutched his hair and pulled him into the water, where he was speedily drowned.

This someone was Skwináuq the fish-man who had fallen into the sea, and thus repaid Raven's treachery. When Raven was dead, Skwináuq let him come to the surface. The lifeless body floated away, drifting from spot to spot for a whole moon.

At the end of that period he was thrown up by the waves on the beach. He lay in the sun for three days, at the end of which time he was brought back to life by the sun. When he was thoroughly himself again he related his adventure to his friend the Crane.

Day by day he sat upon a tree cracking jokes with all the other birds. Said he to them, " Take care not to get drowned in the fall of the year or you will never get alive again. Choose the Spring-time and then the sun will warm you to life again. It's great fun drowning and coming back to life; you people should try it for yourselves." But no one seemed inclined to take his advice, and he soon betook himself to other parts.

STORY OF SEmátl.

When SEmátl reached the age of puberty, his mother said to him, " I want you to undergo your KwEtcéit and try and secure yourself a SkwīnoñÉt (spirit helper). He will help you avenge your father's death, who was killed by such and such persons." The youth went forth into the forest to keep his lonely vigil and laid himself down by the side of a great boulder.

One night the Spirit of the Boulder came to him in his dreams and said, " Why are you sleeping here ? " The youth answered, " Because I desire help to become a great runner and a brave warrior." Replied the spirit, " You can't become such unless you skin the soles of your feet, and employ Wolf to do it for you."

" How shall I find Wolf ? " questioned the youth. " You must first go to the mountain Tlāwulnóq ; there you will see many bones and a great quantity of hair. That is the place for you to sleep in, and where you will find Wolf." In the morning he returns to his home and relates to his mother what had happened to him. Said he : " TsElQān (the Boulder Spirit) bade me seek the Wolf chief who lives at the foot of Tlāwulnóq, telling me that he would help me."

His mother replies, "Very good, my son, do as you have been bidden, but not yet awhile; wait ten days and in the meantime get me some kaiʜaltlp (a certain bark), and I will make some strong medicine for you."

The youth procured the bark, and his mother beat it up very fine and made a drink from it. During the ten days he drinks the bark tea, and eats deer fat only. When the ten days were up she bade him set forth. Said she, "When you get to the mountain, follow the evening star and this will lead you to the place you seek." The youth set out, and following his mother's instructions came in due course to the mouth of a cave round about which lay many bones, and a great quantity of hair. Here he lay down and slept.

Wolf and his family came to the mouth of the cave, and the Wolf chief said, "What is that snoring that I hear? and where does this nice smell of deer fat and sweet breath come from? Ah, I see," he continued, as his eyes alighted upon the sleeping youth.

He and his wife now carry the young man into their cave and then send for his children's instructor Squirrel. When Squirrel arrives he is shown the semi-conscious youth and told to scratch off the skin from the young man's feet. "Scratch," said Wolf, "till you lay bare the cords and sinews." This Squirrel did, and then Wolf took some pieces of deer sinew, of which he had a great store in the cave, cut out the sinews from the feet and legs of the youth and replaced them with those of the deer. The young man's arms and back were treated in like manner. When he had completed his task he called his youngest son to him and said, "See if you can lift up this young man? Now breathe your strong breath into him."

The young Wolf did so and inflated the young man's chest with his wolf-breath. This revives him, and he becomes conscious again. Young Wolf now says to him, "Now you are fleet and strong. If you run for ten or twenty days you will never tire or get winded. I can run from one end of the island to the other before the tides can change. I have given you all my strength and wind. Now you should ask my father what is the best weapon to kill with." The youth did so, and received from the old Wolf his own Kwā́kwustᴇn (skull-tapper) made from the horn of an Elk. "Your name henceforward is Kwā́kwultūq. But if you want your powers to continue you must be careful not to lie with a woman when your Kwā́kwustᴇn is in the house or it will club you to death. First hide it in the mountain. When you sing your war-song say these words: 'Ha! ha! ha! haha! úsa Kwā́kwultūq.' (Ha! ha! ha! haha! I am Kwā́kwultūq!) When you sing this song your enemies will lose their senses."

The youth remained with the wolves all that winter till the snow thawed; then he went back to his home. When he arrived he looked in and saw his mother crying and his uncle lying on the bed. The latter catching sight of him said to his sister: "What is that at the door? It has eyes and hair like an animal." The youth was crouching in the doorway holding his club. He now cries out, "Don't be afraid; I won't hurt you. My name is Kwā́kwultūq." But so sharp and piercing was his voice that both his mother and uncle cried out in terror, and he had great difficulty in making himself known to them and allaying their fear of him.

Now his father had been killed by some people who lived at Plumper's Pass, and he was determined to avenge his death. He questions his uncle as to the best way of getting there. "You must go by canoe," said the uncle. "Very good," replied the youth, "will you call your people to paddle me across." The uncle calls his slaves and the youth taught them his war-song to sing as they went. In course of time they come to a place called TsElkālō, where lived the people who had killed his father. The people heard the singing of the paddlers and came out to see what it meant, and with them came the chief and his five strong sons. It was this chief who had killed the youth's father. His name was QēyakwútstEn, a noted slave maker. When Kwā́kwultūq's canoe was about 30 feet from the shore he sprang to his feet, uttered his magic war-song, and leaped upon the shore. The mother of the five young men cries to them to run for the woods, but the words of Kwā́kwultūq's song benumbs their limbs and they remain helpless. He clubs them all to death and then returns home laden with booty.

Nobody can touch or catch Kwā́kwultūq, so swift and active is he; and he caused much trouble and sorrow in the land. His death eventually came about in the following manner. He was at war with some of the Clallam tribes and was making his usual great leaps when a branch in a lofty tree caught in one of the fur anklets upon his feet and so held him that he could neither get up nor down, and the Clallam people shot him to death as he hung suspended by his anklet. When he was dead they tried to get him down, but were unable to do so. So they cut off his head and left the body hanging from the branch of the tree. Some time later his people came and burnt down the tree and recovered and carried off his body.

A LEK·OÑÉNEÑ VOCABULARY.

Terms of Consanguinity and Affinity.

great-great-great-grandfather
„ „ „ „ *mother* } stsúpaiyuk·ō.

great-great-grandfather
„ „ „ *mother* } ṓkwīyuk·ō.

great-grandfather
„ „ *mother* } síla.

grandfather
„ *mother* } tsámuk·o.

grandson
granddaughter } ḗñus. *My grandson*, nE ḗñus, *my granddaughter*, sía nE ḗñus.

grandparents, sElsíla.

grandchildren, ūñḗñus.

my son, nuñuna, tc' suñEtcEtl.

my daughter, sEnuñuna.

my family, nEñuñuna.

my parents, nE tÉlos.

mother, tan; *my mother,* nE tan; *addressed,* ta.

father, man; *my father,* nE man; „ ma.

mother's
father's } *brother,* satc's.

mother's
father's } *sister,* satc's.

my uncles and aunts collectively, nE sālatc's. If parents dead, then called s'kEsätcatl.

my eldest brother
„ „ *sister* } nE céyotl.
„ „ *cousin*

my younger brother } nE sáitcin. This term is used when speaker is proud of
„ „ *sister* the relationship; if otherwise, he uses the term
„ „ *cousin* sEtcatl.

These terms are used alike by boys and girls.

brother's
sister's } *child,* stékwEn; collective form, stEtékwEn.

nephews and nieces (members of one family), nuqnEtsalakwum. If immediate relative be dead, they are then called skwEnútcEtl.

my eldest child, nE slutklétcEtl.

my youngest child, nE sëtcítcEtl.

my father-in-law
my mother „ } nE slálEtl.

my son-in-law
my daughter-in-law } nE stcútatl.

my step-father
my step-mother } nE cQ-sák·wEtl.

my step-son
„ „ *daughter* } nE s'ñañ.

my father's
„ *mother's* } *brother's wife,* nE cQ-satc.

„ *father's*
„ *mother's* } *sister's husband,* nE cQ-satc.

wife's { *brothers and*
male cousins } slatl.

wife's { *sisters and*
female cousins } sñätwon.

husband's { *brothers and*
male cousins } sñätwon.

husband's { *sisters and*
female cousins } cwälEs.

wife's relations collectively, sElsElälEtl.

A man calls his wife's relations after her death by another term, viz., tcā́iya.

husband's relations, cQ-stcā́latca.
my wife, nE sléni.
my husband, nE stā́lus.
widow
widower } sīyā́tEn.
married man, tc'Etlā́ni = "*belongs to woman.*"
„ *woman*, tc'Ewḗka = "*belongs to man.*"

CORPOREAL TERMS.

head, 'sk·wā́ñi.
face, sEásis or s'ásis.
crown of head, sk·'talaúk·.
back of head, täítciñ.
forehead, skwúñus.
cheek, clēakwun.
jaw, s'k·lutcā́sun.
skull, tsāmḗuk.
hair, siā́tEn.
beard, kwḗnESEn.
hair of body, kwḗnEkWEs.
„ „ *animals*, skwólukEn.
tooth, tcínis.
tongue, tḗqsEtl.
palate, slúkEn.
gums, slúkēnus.
nose, núksEn.
ear, k·wólEn.
eye, kúloñ.
eye-lashes, tlúptEn.
eye-brows, sáñEn.
pupil of eye, nEk·Hálos.
mouth, tsā́sin.
lips, slEk·wā́sEn.
upper-lip, 'slā́sum.
lower-lip, s'tlEtcasun.
throat, HWóñEn.
neck, HWónsnEtl.
breast (*female*), skúma.
milk of the breast, „
breast (*male*), ts'uñEtl or ts'unElç.
back, stáskWEtl.

spine, tsúmōwitc.
loins, swōk·ᵘ.
stomach, k·las.
arm, tā́lō.
shoulder, kōkwḗuk·En.
forearm, sâmElā́qEn.
elbow, skwomkwolaqEn.
hand, sā́lis.
fingers, s'tcEk·ā́lsis.
finger-nails, s'tcā́lsis.
thumb, sintlā́lasis, *cf.* sintla = *oldest.*
thigh, slā́lEtc.
leg, tl'k·úsin.
knee, sk·ā́kuñ.
lower leg, sampsEn.
foot, snúkWEtlsEn.
instep, kúloñsEn.
toes, s'tcEqā́lsEn.
toe-nails, s'tcEcálsEn.
bone, tsâm.
skin, kwólō (*the whole skin*=kwolō-kwḗkwis).
heart, tsā́la.
blood, sEā́tcEn.
lungs, skā́kwa.
bowels, guk·é.
spinal cord, k·lḗñuñ.
brain, smÉtskEn.
liver, stā́ka.
fat, nos.
rib, lukwuq.
tail, stlupḗsnitc.

Terms of the Principal Animals, etc.

elk, k·aiyḗEtc.
black bear, s'tcútwun.
grizzly bear, k·waíētcin.
beaver, skElaú.
racoon, sqaík·wus.
squirrel, tsupsíasEn.
flea, tātétlum.
lizard (*rock*) QolQolawā́tcin (= "throw-away-tail·").
lizard (*water*), pḗtcin.
snake, s'Eā́tlka.
snail, k·aiā́tlEm.
hawk, HuñHáñul.
fish-hook, tcḗoqtcuq.
robin, kwúskuq.
deer, smaíyes.
panther, sHwṓwa.
wolf, s'tEk·aíyä.
mink, tcEtcēák·un.
land otter, skā́atl.
rat, k·wā́t'En.
louse, ñÉsuñ.
spider, tuktúkEm.
frog, skEkā́nuq.
frog (*young in the forest in autumn*), wā́k·uk.
frog (*in spring*), wā́kutl ("= croaking").
grouse (*blue*), ñḗEt.
grouse (*willow*), sk wuts.
pigeon, humṓ.
blue-jay, tcitcḗa.
snipe, skaíEks.
„ skukaíya.
wren, tEtúm.
raven, s'k·ūtā́.
eagle, tcúskun.
„ sk·'tāánūq.
„ k·wúlñāsEn.
loon, snúk·wa.
canvas-back duck, HulHúlawitl.
loon (*big*), swā́kwun.
diver, Qḗkwus.
„ sQEtḗs.
„ tluktātciñ.
crane, s'múk·wa.
seal, ā́suq.
porpoise, kwā́nEt.
sea-lion, ces.
whale, kwÉnis.
sea-trout, stEánis.
halibut, sā́tEq.
cod (*black*), ḗyit.
„ (*red*), tuk·tuk·.
„ (*rock*), ḗasḗsin.
„ *tom*, ts'ā́auq.
herring, slā́ñit.
smelt, kwā́tlis.
flat-fish, k·āk·au.
king-fisher, tsEtcÉla.
wood-pecker, tsḗEkut.
„ tsútuñ.
owl (*large*), tcitctúñuq.
„ (*small*)s'pupulkwētza (= "ghosts").
crow, sk·ōk·wā́ta.
goose, tlā́kwEqEn.
mallard, túnuksEn.
brant, Hwā́'auk·, sHulHultc.
swan, swṓkEn.
duck, stúmEtc.
„ tsauitcā́qEn.
„ kwā́kwEloq.
„ aúña.
„ sEsaúq.
sea-gull, kúni.
fur-seal, tsaíya.
sea-otter, túmas.
salmon (*spring*), kwḗtcin.
„ (*sock-eye*), súkai.
„ (*cohoc*), k·Étcuks.
„ (*dog*), kwā́lōq.
„ (*hump-back*), húnEn.
„ (*steel-head*), s'Hauk·um.

flounder, p'ṓwi.
whiting, skwēmus.
bull-head (*large*), skwḗnEtl.
„ (*small*), skwaíyūwitc.
devil-fish, skénuk·^{u}, tlā́aiyuk·.
crab, átcuq.
clam (*large*), swām.
clam (*medium*), sā́qwa.
„ (*small*), s'k·otlāaí.
cockle, stlElā́um.
mussel, tlaúEkum.
sea-cucumber, sḗkōt.
sea-eggs (*large*,) qḗkwa.
„ (*small*,) skwḗtsē.

Terms of Principal Berries and Roots eaten by the LEKÚÑEN.

strawberry, tḗluk·.
salmonberry, Elḗla.
blackberry, skwEláliñuq.
salalberry, táka.
gooseberry, támūq.
hawthornberry, mā́itciñ.
sour grass, tEmā́sa.
wild parsnip, tlā́QEl.
lily bulb, sákwitcm.
„ „ tlElán.
fern-root (*Pteris aquilina*), skwaíūq.
white-clover root, ts'átciñ.
"*sōpalali*" *berry*, sHā́isum.
wild cherry, stsákQun.
whortleberry (*blue*), ā̃sa.
„ (*red*), pípuQ.
raspbeary (*black*), s'k·wā́ma.
crab-apple, kā́auq.
"*ground-apple*," k·lḗk·wun.
"*kamass*" *root*, kwEtlál.
carrot (*wild*), sā́kwuk.
onion „ k·ṓqkwaiitc.
tulip bulb, tsúlok·.
wild rhubarb, sauk·, yā́la.
wild celery, skutHaíyas. The seed of this plant was used for making a kind of tea.

GENERAL GLOSSARY OF THE COMMONER WORDS.

able, *can*, hoñ.
I can, hoñ-sEn kō.
above, sítlnuñ.
across, tákwEn.
adopt, skwonḗtluñ.
afternoon, hai tauq k·ḗlEt.
again, kElát.
aid, *help*, kwEnāñEs.
alder-tree, skwoñEtltc.
all, muk·^{u}.
always, ōyá.
anchor, k'sEnátEn.
anger, tEtaíyuk·.
animal (*generic*), tEtāsĔlanūQ.
another, kElát.
give me another, anátcE kElát.
answer to, nūqtálkun.
anybody, muk·^{u} san.
apple (*crab*), kā́auq.
apple-tree, kāqwiltc.
ashamed, qaíaqa.
I am ashamed, qaíaqa-sEn.
ask, *to*, tc'tā́tcE.
ashes, s'tcEkōsála.
awl, 'sutlkwḗñus.
axe, skwōkúñ.
bad, sqās.
bail, *to*, kwÉlesEt.
bailer, *a*, ts'añtEn.
bait, ñálñuñ.
bake, *to*, tálak.
bark of tree, tcÉli.

bark, to, wEwás.
he is barking, wÉ'sEla.
basket, mEhói.
„ *(large),* súmEtEn.
„ *(packing),* tlunas.
beach, sásau.
beat, to, k·ōtcátiñ.
beautiful, éi.
bed, cwámut.
beg, to, úña.
below, klátcitl.
„ *down stream,* k·wok·^{u}.
belt, swīámtEn.
bend, to (stick), EsnáñEtl.
bent, EskwásEtl, spápi.
berry, 'sEtltÉnEñ.
big, large, tcuk.
billow, wave, yálatcip.
bite, to, ts'uñut.
bitter, sáqEn.
black, nuk·éEq.
blackberry, skwulálūñoq.
blanket, tlskēt.
bleeding, sútcEñ.
blind, aúwina c'kwinátl.
blow, to, páQEt; *blow it!* pāQEt-tcE!
blue, tsáwoñ.
blush, to, nukutsélEs; *he is blushing,* nukulsélEs kō.
boil, to, kwúlus; *the water is boiling,* tlapákuñ.
bold, brave, Qstcánukwoñ.
bore, to, sluk·ut.
borer, a, ckultcénutl.
borrow, to, áiyil.
bottle (made from dog-fish gut), sÉsa.
bow, to, nEkwásiñ.
bow, a, cwumátEn.
box, klaíakus.
boy, stlétlätlkus; *youth,* swéakātl.
braid, to, tuñsáñuñ.
branch, tsustásis.
break, to, tuk·^{u}.
breaking, tuk·tuk·Et; *break it up!* tuk·tuk·Et-tcE!
bright, kaíqunañ.
bring, unaúq; *bring it here!* unaúq-sōQ-atlá!
brush, a, cwopúlkEn.
burn, to, tcuk·ū.
bury, to, tcinit.
bush, Ecécits.
call, to, kwánis.
canoe, snūkwEtl.
camp, kúlñuñ.
carry, to, īkwinat.
carve, to, Hutkwéñus; *he is carving* HusHut-kō.
catch, to, kwínEt; *catch it!* kwínEtcE!
cedar, q'pái.
change, to, aiyákut.
charcoal, tcésut.
chew, to, ñíakwut.
chief, notable, héwus, silísīám.
child, stlētlutlkEtl.
children, stlālētlutlkEtl.
choke, to (from eating), t'kwénatl.
„ „ *(from external pressure)* tcuptlnálEtEn.
chop, to, k·ok·wúmEla.
clay, sēyúk.
climb, to, cÉluñ.
cloud (white), EsítEn.
coffin, sták·oñ.
cold, stsátlEñ.
comb, to, tEcékoñ.
comb, a, tlsíñEñ.
come, to, ená.
I am coming, ō yEEná-sEn.
corpse, kw'tlEsnánitc.
cotton-wood-tree, tcÉnawEtlp.
crab-tree, kEkQitltc.
crab-apple, kauq.
cry, to, Qāñ.
current, cQoñálEkEn.
cut, to, klēsut; *cut it,* klēsut-sōq.

daily, mok·^{u}-skwā́tcil; *ad litt.* "every day," "all the days."
dance, to, k·waiḗluc.
damp, sā́sāsQoñ.
dark, tlātc.
darling, dear, nícQōskwā.
daybreak, skū́tcalán.
daylight, kw'tl-kwā́tcil.
day, skwā́tcil.
dead, kwai; *just dead*, kw'tl ḳ·umEtlnEtl; *sometime dead*, sk·wākwai.
deaf, sk·wolán.
deep, klutc.
deer-hide, kwÉlō-Esméis.
desire, wish for, to, stlē.
difficult (*to do*), k·lē kō.
different, nēts.
dig, to, sḗakweñEtl.
dim, cQonā́wus.
dirty, kElḗma. *Collective form as applied to people*, kEkElḗma.
disappear, to, ōsúqwEal.
dish (*long wooden ones*), kw'sā́lEs.
„ (*small ones*), emēman lā́sEn.
„ (*large ones*), tcEk lā́sEn.
disappoint, to, mÉluk.
you disappointed me, mÉlukEsōQ kō.
distribute, to, tlḗtut.
dive, to, núkuñ.
dizzy, giddy, sÉlk·tuñ.
door, sā́atl.
down, skaíEs.
drag, to, Qṓkwet.
dream, to, skElkElā́sEn.
I am dreaming, nE-skElkElā́sEn.
dream, to (*a mystic dream*), skwīnā́ñEt.
drop, to, kwískwau.
drown, to, kuss; *he is drowned*, Es kEsīkuss.
drum (*made from skin*), kwélō-kaúit.
„ „ „ *board*, kwauätiñ.
each, nā́tsa.
earth, kōqwElnūq, tuñuq.
eat, to, ḗtlEn; *he is eating*, tū ḗtlEn.
easy, lḗluk; *it is easy*, ō lḗluk kō.
echo, sämúñEz.
eddy, k·aíaquñ.
elder-tree (*red-berry*), tsḗwuk·.
„ (*purple-berry*), tsḗkōk.
enemy, cEmän.
enough, kw'tlātlum or Estlatlum.
evening, tā́ñEn.
fall, to, tcäk.
far, lḗla.
fat, grease, nos.
„ *stout*, nōl.
feel, to, tlāpEt.
fight, to, kwḗwuntEl.
file, a, Ectākus (= *grind-stone*).
fill, to, lEtsút.
find, to, kwÉnuq.
finish, to, cuk·.
fir (*red*), tsEcā́i.
fir, skúmiyoks.
fire, stcókōsa; *burnt*, tcuk.
fire-stones, kwentā́lus.
fire-place, stcókōsa-ála.
fire-wood, ctcātl.
fish, stluknā́ñiñ.
fish-bone, sâm, utl stluknā́ñiñ.
fisherman, ō yṓsyE stluknā́ñiñ.
flame, QEtā́kuñ.
flat, Estluk·unok·^{u}.
flesh, slḗuk·.
flower, skwā́kEñ.
float, to, pEpákuñ.
fog, spaQoñ.
follow, to, tcīsálakuñ.
food, sEétlEn.
freeze, to, tcīQalEs; *the water is frozen*, pēwitEñ.
fun, ēyósiñ.
gamble, to, nūkslEhálEm.
ghost, spilkwḗtsa.
girl, slinEtcatl.
girls, slinlinatcālatl.

give, to, áñust.
glad, hḗalauk.
  I am glad, hḗalauksEn.
good, ḗi.
good-bye, haikū́tca, haiyákō.
grass, sqEsā́i.
great, big, tcuk·.
greedy, nEkÉlEwutl.
green, nEkwäi.
groan, to, únqusEt.
grow, to, tsḗsiñ.
grumble, to, tEtátuk·.
guide, to, kwḗoq.
gum, pitch, smā́mitc.
hail, tsutēmélcEn.
handsome (of face), nōqwaíyis.
hard, k·lEq.
hark, hāalañiñ-tci (tci, *imperative suffix*).
hat, stcÉsak· ; *hats,* stcEtcēsauk·.
he, tsäa tsäa ō nētl.
hear, to, aläñEn.
  I hear you, ō alā́ñEn-sEn ko.
heavy, 'sEl.
help, to, kwEnáñEs.
hide, to, kwā́lEs.
  I will hide, kwā́lEs-sEn-sa.
hill, Espā́puk.
hold, to, kwinā́t.
hole (round), sutlk·^{u}.
  „ *split,* estcā́kEtl.
hollow (open), estukoñ.
  „ *closed,* cūwḗwon.
hook (gaff), tlēkwun.
home (house), áluñ.
horn, ts'ḗstEn.
hot, kwā́lEs.
house, áluñ ; *small house,* āā́luñ.
howl, to, wṓsels.
huckleberry, skwṓtcis, pḗpQō.
hunt, to, ā́mEna.
hunter, umā́mEna.
husband, stā́lus, *addressed,* nau.

I, tīa úsa.
ice, sḗma, slÉloq,
infant, skā́kāla, coll. skalā́kala.
itch, kwulkwóluñ.
jump, to, Qētuñ.
keep, to, unskwā́tQ.
kettle (wooden), súña.
  „ *(basket),* ts'úmtEn.
kiss, to, mukwā́sEt.
kneel, to, sukútlkañ.
knife, cḗpEn.
know, to, q'tcēt.
lake, hā́tca.
language, ckwEltEn.
large, big, tcuk·.
laugh, to, nEnḗyuñ.
leaf, 'sā́tstla.
lend, to, áyEl.
lie, to, nuqkaíyuqkun.
lice, ñúsEn.
lick, to, tlā́mEt.
lie down, to, skwásEt.
life, úncwili.
lift, to, sáat.
light (of day), státū.
lightning, skwÉnEla utl sqōkwās (=" glance " of the thunder-bird).
little, tlEtlōtla.
live, to, cwíli.
log, kw'tlā́i.
long, k·lā́kut.
lose, to, Qēl.
loud, tcEkúkEn.
man, swēka ; *men,* sōwḗEka.
maiden, k·ā́ñi, tcislā́ni.
maidens, k·alā́ñi, tcEslensáni.
maple-tree, stlā́Etltc.
married man, tc'tlā́ni.
married woman, tc'wḗEka.
mark, to, qElÉla.
mat (bed), slaúwin.
mat (seat), silEwátcin.
me, tía úsa.

mean, núktli.
meat, sléuk·.
medicine, stā́lEñuq.
meet, to, núktcimost.
melt, to, tcā́qwEt; *melt it yourself,* tcā́qwEt-skwÉtc.
mend, to, núqEput.
middle of night, tāq-nuq-net.
middle of day, tāq-ḗlet.
mind, qútcnEñ.
mine, ⎫ tía Enskwa, *this is mine.*
Enskwa ⎭ aúa sniskwa, *it's not mine.*
mistake, to, mElmā́luñ.
mix, to, mElmḗlitc.
moccasin, slúkcin.
moon, 'skaltc.
morning, kwEtcī́l.
morning-star, kwEtcī́l lā́lus.
mountain, sísitl-sñā́nyit (= high rocks).
move, to, tcā́nis.
„ *to, one's body,* kwḗEksEt.
much, many, ñuñ.
murder, to, k·ōEtcī́la.
murderer, kwilḗūs.
naked, Etlā́tluk; *I am naked,* Etlā́tluk-sEn.
name, snā.
narrow, QéaQōQai.
near, stásEtl.
needle, tcátsEn.
needy, poor, Estā́sEs.
net, swÉltEn.
night, snàt.
no, aúa.
not, aúa aúanE.
none, aúanE.
noon, tāk skwā́tcil.
now, Qōn, tía kō Qoñ.
nut (hazel), k·wupaúq.
„ *(oak),* sīsīā́kwa.
old, kw'stlalōq, coll. kw'stlilalōq.
orphan, kwániñ, coll. kwEláníñ.
outside, EsákEtl (= *out of doors*).
outside, skÉlawutl (*with reference to objects*).
paddle, Qā́ñit.
pail, skwā́tEn.
pain, qā́tlitl.
paint, tÉmutl.
paint, to, qúlet; *paint it,* qúlEt-tci.
pass, to, tcīlā́ṹ.
path, trail, sā́iyEtlsEtl.
„ *road,* sā́tl.
paw, sā́lis (= hand).
pay, to, nṹnatct'.
peel, to (apples, etc.), cpā́lEst.
„ „ *(trees),* sk·wḗkwust.
peep, to (through a hole), tcitkā́sin.
„ „ *(round an object),* nukwilā́sin.
people, estā́liñoq.
perhaps, ēwā́tca; *perhaps I'll go,* ēwā́tca úsōīyā-sEn-sa.
play, to, yēyā́sin.
prick, to, tutc; *don't prick me,* aúa tutc noñEs.
proud, Esmā́tsEn.
push, to, tcā́ñit.
quarrel, to, kwElnṹEl.
quiet, to be, sā́moq; *be quiet!* sā́moq-tci!
race, to, ōwā́tEl, ṓtal; *foot-race,* kwañíñut; *I will race you,* kwā́ñiñut-sEn-sa. In the verbal form it will be seen that the accent is thrown forward.
raw, qaits.
recognize, to, ṓpEtit; *I recognized him,* ṓpEtit-sEn-tsä.
red, nEsúk·ᵘ.
red hot, neQailuñ.
rest, to, kākūñ; *rest!* kākūñtci!
remember, to, ṓhak·ᵘ.
return, to, nukEyÉlkun.
revive, to, hEntcā́wīyEs.
ring, a, stḗti.
ripe, k·wol; *it's ripe,* kw'tl k·wol.

river, stā́lō.
roast, to, k·wóluñ.
„ „ (*roots in ashes*), stā́luk.
rob, to, kEnḗtuñ.
robber, kā́nkun.
roof, slā́lEtuq.
root, kwotsúñ.
rope, line, tcā́tcEtl (*cedar*), kwāñ (*kelp*).
rose, kúlok.
round (*long things*), cilkwḗos.
„ (*flat* „), usīyā́luk·.
rub, to, Qḗakwut; *I am rubbing it*, ō-Qḗakwut-sEn-ko.
run, to, kwā́niñEt.
sail, pōQúnuñ.
same, as, like, QEnā́ñ; *same as this*, QEnā́ñ tlā.
sand, pōkwútcin; *gravel*, ts'qait.
say, to, yEsā́s; *tell me*, yEsā́stci.
scald, to, kwäs.
scold, to, kwā́liñut.
scrape, to (*carrots, etc.*), Eqúkst.
scrape, to (*round objects*), Eqā́list.
scratch, to, ḗaqEt.
scream, to, kōkwā́tcin.
search, to, saíyukt'.
sea, k·tlā́tlsE.
seed, plant, to, tcinḗñEtl.
see, to, k·wónEt (*different from* kwúnEt, *to take*).
send, to, set.
sew, to, tcā́iyits.
shadow, kēakEnā́tEn.
shake, to, kwḗEqt.
shallow, cácum.
shame, qaíaqa; *you ought to be ashamed of yourself*, EnsqētsEl wā.
shaman, cwonám.
sharp (*edge*), aiyEs; (*point*), aiyEsúksin.
sharpen, to (*point*), cpúkstE (*edge*), tEkā́qEt.
shoot, tlEnakut; *it's shot*, EstlEnk^{u}.
short, tcEtcḗyutl.
shout, to, kwā́tcuñ.
show, to, k·unit; *show it to me*, k·unit-tā́noQ.
shut, to, Q'tEkut.
sick, skā́tlEtl; *I am sick*, Eskā́tlEtl-sEn.
sight, skwEnEla (=*glance, gleam of the eye*).
sing, to, stḗlEm.
singing, tEtḗlEm.
sink, to, k·lātcḗluñ.
sit, to, úmut; *sit down*, úmut-tci.
sky, kwā́tcil.
slap, to, tlā́kwut.
slave, stóñEtloñ.
sleep to, ḗtut; *I feel sleepy*, etā́tuñ-sEn.
slide, to, sqwḗmEtEñ.
split, to, qaítuñ.
slow, ā́tcEñ.
smart, quick, HoñHoñ, *lively*=sQaiyū́es.
smell, to, hā́kwEnūq.
smell, odor, hā́ak.
smother, to, tuk^{u}·.
smile, to, nuqnEnḗyuñus.
smoke, púkōñ.
snail, tluqwomḗwus (=*slippery body*).
sneeze, hásiñ.
snore, tlEtā́kwuñ.
he is snoring, tlEtā́kwuñ ko.
snow, ñáka; *it is snowing*, tcíyuk.
snow-shoes, tcīEkwúmcin.
soak, to, stálEkai.
soft, limp, nēákwom.
„ (*to touch*), kwāl.
song, stēluñ.
soon, tū́īātl.
soot, kwaiḗtcup.
sore, a, skwā́kwutl: *I am sore*, kā́kEtlsEn.
soup, slāp'.
sour, tcā́Quñ.
spawn, kÉluq.
sparks, tlElḗtsiñ.
speak, to, kwEl.
spit, to, tcūQátlsa.

split, to, tcuq.

spoil, kulkÉla; *don't spoil it,* aúa-soQ. kulkulélet.

spoon, qā́lō (*horn*), tlā́pEn (*wooden*).

spring of water, mEtā́kō, mā́tcō.

squeeze, to (*with hand*), tcḗput.

„ *hug, to,* tcEpā́st.

„ *to* (*between logs*), Estcúnz.

stand, tsḗtliñ.

standing, sEtsḗtliñ.

star, tEtaúisina.

starve, to, tl'tcut.

steal, to, kān.

steam, vapor, cā́laQuñ.

step, to (*over something*), tEqā́kwus.

„ „ tcinsÉniñ.

stick, to (*in*), ñēEkut.

„ „ (*to*), tluk$^{\cdot u}$.

sticky, tluk$^{\cdot u}$tluk$^{\cdot u}$.

stone, sñā́ñit.

stoney, sñalā́nit (= *many stones*).

stoop, to, kEpā̆́siñ.

stop, to Énūq ; *stop him!* Énuqtūq!

straight, Estcā́iyEn.

strap, suñā́tEn (=*packing instrument*).

stream, a, stā́tālō (=*dim. of river*), kwā́itEñ.

strength, power, tzantckwā́mkwum.

strike, to, ctcut.

strong, kwā́mkwum.

stump, ts'ā́lEtc.

stumble, to, tlēuksEn.

summer, tciñ kwḗlis.

spring, tciñ kwṓkwElos.

suck, to, skwā́tiñ.

sun, skōkwÉl.

sun-beam, sqúnas tc' skōkwÉl (= "*legs of the sun.*")

sun-rise, kwān (=*coming over edge of horizon*).

sun-set, Q'tuk (=*fall down*).

swallow, to, ñúkEt.

sweat, to, tcā́kuñ.

swear, to, kusḗniñ.

swell, to, nuksā́lEtEn.

sweep, to, ḗQut.

sweet, sā́kuñ.

swim, to, tuñóñ.

swimming, ētuñóñ.

swift, quick, Qoñ.

swing, to, kḗtātuñ.

take, to, kwínit; *take it,* kwínit-tci.

tall, tlāk·ut.

tame, k·wā́lk·wEl.

taste, to, tät; *taste it,* tät-tci.

teach, to, Ekwā́tcEtl.

tear, to (*cloth*), súkEt; *don't tear it,* aúa-soQ súkEt.

tear (*lacrima*), ckos.

tell, to, yEsā́s.

that, tsȧ.

thaw, to, tcauq; *it's thawing now,* ētcauq Qoñ.

the, tE (masc.), sE (fem.).

thee, tE núkwa (masc.), sE nukwa (fem.).

there, lā, tṓlō.

thick, tc'tlut.

thief, kánkEn.

thin, tcitcEmḗl (*with reference to material*).

thin, Eskwúmoq (*with reference to persons*).

this, tlā (*referring to objects other than human*).

this, tía (masc.), sía (fem.), *also used with inanimate objects.*

thunder, sQōkQā́s or sqōkwā́s (=*thunder bird*).

throw away, to, Qḗltuq.

throw, to, ts'tsälā́.

tickle, to, sḗptEñ.

tie, to, k·aíakwEt.

tired, stcḗkwus.

to-day, ánuk.

to-morrow, kō kwḗtcil.

torch, ñāk.

touch, to, Esḗstuq ; *don't touch it,* aúasōQ Esḗstuq.
track, trail, huñañÉnz.
trap (*for animals*), HúcEn.
„ (*fish*), skElā́liñōq.
tremble, to (*from fear*), sā́isi.
„ „ (*from cold*), tcÉnuñ.
try, to, tā́at.
I will try, tā́at-sEn-sa.
turn, to (*round*), tcilánisEt.
„ „ (*over*), tcilṓsEt.
twilight, skaílEt.
twist, to, qElútcEt.
ugly, sqās.
uncover, to, k·lEwēst.
understand, know, to, ōqtcḗt.
undress, to, tlā́kwuñ.
village, túñuq (=*earth, land*), tía na túñuq, *this is my country.*
voice, skwáltEn.
vomit, to, tcáat.
wade, to, sḗaQuñ.
wait, to, ñukwaiḗs, tswiskā́i, kā́i ; *he is waiting,* ō ñukwātēñEs kō.
wake up, to, QútcEsEt.
walk, to, stuñ.
wall, tā́ñEn.
war, qḗluq.
warm, hot, kwálEs.
wart, 'stcúpQon.
wash, to (*oneself*), sā́koñ.
watch, QēyElṓs.
water, kwā.
wave (*small*), hā́iyEluk.
„ (*billow*), yā́lEtcup.
we, tE tlñiñEtl.
weave, to, ts'lākEñ.
wedge, kwaitEq (*maul, for driving*= ctétlsis).
weep, to, suk·unā́lEs.
whisper, to, saúkuñ.
whistle, to, cāp't'.
why? nētl kw's ustā́ñut ?
why do you whistle? nētl kw's ustā́ñut uncūcāp't'.
white, puk·.
who, sañ.
wide, tl'k·ut.
widow, sīyátEn.
widower, säsīyátEn.
wife, stā́lEs ; *when addressed by husband,* nau.
willow tree, sqwäléEtltc.
win, to, nEtl'wónuk.
wind, 'sp'wÉla.
„ *to,* k·Élakwist.
wing, stlEkál.
wink, to, tcEpā́lEsEñ.
winter, tciñ sā́tliñ.
wipe, to, átcEt.
witch, sīaúa.
with, aisūwa, kwacínisa.
I'll go with you, yE sEn sa ai sū́wa.
woman, slā́ni.
wood, stcatl.
work to, tcē ; *I am working,* tcē Es-sEn.
I have been working, ō tcē yE sEn kō.
wring, to, tcḗsut.
yawn, to, wákus.
year, nEtsa (=*one*) stcElánEñ.
yellow, nukaíē.
yes, hā́a.
yesterday, tcilakEtl.
you, tE nukwḗlia.

THE KauítsEn OR ISLAND HalkōmélEm.

The following notes and myths on the KauítsEn or Island HalkōmélEm I gathered from Thomas James, an intelligent native of this division.

Socially the KauítsEn have more in common with the neighbouring island tribes than with their brethren of the mainland. Linguistically regarded, however, the original unity of the two divisions is very clearly brought out. Indeed, I may say that it was a source of much gratification to me to find that Thomas James could follow and understand my native texts of the River Halkōmḗlem without the slightest difficulty. The chief distinction between the two divisions is in the presence of a verbal particle "pa" in the island speech which is totally absent from that of the mainland; and in the mode of utterance. The island speech is sharp, brisk and precise, while that of the mainland is slow and drawling to slovenliness. It is this difference in the mode of utterance that makes the speech of the two divisions seem more distinct than it really is. The vocabulary differences do not amount to ten per cent. of the words, and the practical identity of the two forms is admirably brought out in the little story which I have written in the two dialects in parallel columns below.

The first KauítsEn was "tEn skwail," that is, "heaven-born." His name was QultÉmtEn, the name of the second, also "tEn skwail," was StÉtsEn. From these two men and their wives all the KauítsEn people are supposed to be descended.

The story runs thus: In the beginning QultÉmtEn and StÉtsEn lived on Sháwnigan Lake in a house by themselves. For wives they had carved two female figures out of wood, and had partly made a basket, leaving it to be finished by the women.

Now it happened at this time that two "tEn skwail" women lived alone without husbands at Sooke Harbour. By some means the knowledge of the two men came to the two women and they determined to cross the mountain and seek the dwelling of the two men. They perceived the house before they came to it by the smoke ascending from the fire-place. When they reached the dwelling QultÉmtEn and his companion were from home. The women looked round the house and saw the two wooden figures. These they smashed into pieces and threw them into the fire. They then took up the unfinished basket and completed it. Then they hid themselves to await the arrival of the men. QultÉmtEn shortly after came in and at once perceived the finished basket and was well pleased. "The next thing I want you to do now is to talk," said he to the figures which he thought were present. He now looks about for them and presently sees their charred remains in the ashes. Presently StÉtsEn comes home, and he tells him of the finished basket and the loss of their wives. The two men are sorry and grieve. At this the two real women come forward and show themselves. The men bid them welcome, saying "We are very glad to see you; we are very lonely. You shall be our wives." From this union thus brought about, sprang the KauítsEn people, and peace and friendship have always existed between the Sooke and the KauítsEn.

There seems to be an element of real history in this tradition. It is possible that the KauítsEn are comparatively recent comers on the island. The practical identity of their speech with that of the river tribes of the mainland suggests that they cannot have been long separated from the mainland Halkōmḗlem; and it may be that a small band of men from the Fraser Delta drifted or otherwise found their way to the island and intermarried with the Sooke and settled there.

QultÉmtEn is said to have named his children by bestowing modified forms of his own name upon them, thus:—

Masculine Forms.	Feminine Forms.
Qultēmit.	QultēmtEnāat.
KwElástEn.	Qultḗmēyᴇ.
KwElsitstEn.	Kwelsēmīya.
SwelâmsEt.	SīâmtEnât.
Sīâm.	

These names are "sēwanatl snä," that is "sīwēn" names, mystery names. Their significance is now lost.

Common people's names were mostly derived from nick-names.

The following are the list of villages or settlements of the KauítsEn as given me by Thomas James.

	Villages.	First Chiefs.
1.	TsEmḗnus	—
2.	TlumtlúmElets	SQāsílEm.
3.	Kwā́kQonets	—
4.	Tā́tkE	Tsā́sīEtEn.
5.	Kw'säsínus	Cīā́kEsEt.
6.	HúmtsEn	—
7.	QulkwEsā́la	—
8.	S'âmEna (older settlement, Sā́tlām) ...	LāmEqÉsEt.
9.	Kwā́mtcEn...	QultEmtEn.
10.	Kwamēyḗkᴇn.	—
11.	HainípsEn	—
12.	Kwā́tkum	—
13.	Sḗtsmᴇlkun	—

Forty-five years ago the KauítsEn numbered 5,005 souls, according to a census taken by the missionary in charge. To-day they do not exceed 800.

Cowitchin Traditions of a Great Flood and Earthquake.

The KauítsEn proper of Vancouver Island derive their divisional name from the chief mountains of their habitat. They believe that it was here they came together after the great Flood. They say that before the Flood everybody used to dream of its coming. Some of the people heard a voice saying, "Build a big raft which will hold all your family and friends." This they set about doing. They took two large canoes and laid a planking across from one to the other, and on this constructed a house in which they stored all their belongings and much dried fish and other food. They also made a long cedar rope and attached it to a great stone on top of the mountain; they made a hole in this stone by which to fasten the rope, and this stone they say may be seen on the mountain to this day. When this raft was finished a noise like the report of a great cannon was heard and the river began to rise rapidly. There was no rain at all. As the water rose they pulled on their rope and rose with it till the top of the mountain was reached. Then the waters slackened. This condition of things lasted about one moon and then the water level began to fall, leaving the floating trees and logs on the upper parts of the mountain, where they can be seen to this day. When the flood had subsided and let their raft down again it was found that all the animals had been drowned and that the fish had died; there was nothing for the people to eat but the bodies of the drowned animals or the floating fish. A great number of those saved from the flood now died from a sickness caused by eating the dead flesh. At last when the ground was dry the women and children set to work to dig wild carrots. From these they made a medicine which cured their sickness, and they recovered, and in time became a great tribe again.

In the days before the white man there was a great earthquake. It began about the middle of one night and continued about twenty hours, when it ceased. It was so severe that it made all the people sick, threw down their houses and brought great masses of rock down from the mountains. One village was completely buried beneath a land-slide. It was a very terrible experience, the people could neither stand nor sit for the extreme motion of the earth. The old people took their stone pestle hammers one in each hand and pounded the ground with them, chanting a song to the spirit of the earth as they did so. They bade everybody do the same, and a little time after the shocks ceased. It is more than possible that these two traditions have a basis of substantial fact.

HALKŌMĒLEM TEXTS.

Island Dialect.

Nṓnitsa swéEka tcatcilEtltEn tlāsō
A man was fishing then
tcÉnsa útsa nÉtsa tlāsō kw'sō̄́īyuns.
caught a one then he dips (the net).
qon kútaatzäi ē-wEtl-tzā́tlEmEtEs
while so-doing he heard
kwä cḗcpElos. Nētl sō qéEnams,
a whistling noise. Then he listens,
nētl sō tō-hís aisqaílic. Nētl stlās
then awhile he stands. Then
kw'sō̄́īyuns, stlā sō tzā́tlEmEtEs kwä
again he dips, again then he hears a
cḗcpElos stlā sō kw'sō̄́īyuns,
whistling noise again then he dips,

Lower Fraser Dialect.

Nṓnsa swéEka yāyEs tE
A man was working at the
sáltEn, ē-tlās-wä skwā́tsa tE nÉtsa,
fishing, and then he caught a one,
ē-tlās-wä kElát k'äm. Qon-qātátsa
and then again he dips While so-doing
(the bag-net).
ē-wEtl-tslámätEs kwä Hā́pEs.
he heard a whistling-noise.
ē-tlās-wä qElámEtEs tō-hís tsa
Then he listens awhile
k'sqélinHs, ē-tlō kElát k'ám, tlō
he stands, then again he dips, then
kElát tslámatEs kwä Hā́pEs,
again he hears a whistling-noise,

kla wutl kElát tzātlEmEtEs kwä
then again he hears a

cécpElos ē-yätl-nEs tElnūqs kw's
whistling noise then he knew that

nētls tE cúnsEs cécpElos.
it was the game (which had been) whistling.

Nētl sō kwónEts tE uqsémtEn, nētl sō
Then he took the net, then

QōmEsástEs nētl sō tákus.
he folded it up then homewards.

Nētl nE sō Qōníns tE cūwális.
Then he reached the parents-his.

Nētl sō kwals: "NamtsEn tántāla,
Then he said: "Go I away,

tōhístōa émē tsEn QEálEm." Nē au
shortly come I back." Then

tsáwin kwE sléuk, netl sEsō haíya,
he took some food, then he set out,

nētl sō haiyas-kwaiyisit. ō yástsE
then he sought his guardian spirit. always

kw'sō sEsīs tE cwámut tE mEnas.
then kept ready the bed the son-their.

QusénEs tl'kalts aiyēmē humEt.
Four moons he came home.

Netl sō yEtatEkūs nētl sō kwÉnEts
Then he was coming home. then he took

tE sákōm nētl sō tlákuts nē
the cedar-bark then he tied upon

tE kwÉlEs, nētl so kéakusuts, snat
the belly-his then bound it up, night

kw'swEtl humúmEts, áú swEwé sE
it was when he arrived home, she was awake his

sEálōq, nētl sō Qīets tE stālus,
mother, then she woke the husband-her,

nētl sō p'támEts: "Nūái" "ánsä."
then they ask: "It is that you?" "It is I."

Nētl sō nams nEámistQis tE
Then they go to put-him-they-to the

ē-tlō kElát k'äm, tlō kElat
Then again he dips, then again

tslámätEs kwä HápEs. ē-tlas-wä
he hears a whistling-noise. Then he

tulnuQs kw'stlas tE cqEnsEs
knew that it was the game

nī-HáHapEs, tlās-wä kwénits tE
(which) had been whistling, then he took the

swéltEns, ē-tlās-wä lumlúmits.
net-his, then he-folded-it-up.

ē-tlās-wä nEms tāk·^{u}Q, ē-tlās-wä
then he went home, then

Qunins tE cōwális ē-tlās-wä
he reached the parents his then

kwäls: NEm-tsEn ēyilisála, tōhístsa
he said: Go I away, shortly

ēmē tsEn k'onsit. ē-tlās-Es-wä kwEnits
come I back. And then he took

tE ämímEnslēuk·^{u}. ē-tlās-wa nEms,
a little food. Then he-set-out,

ē-tlās-Es-wä kwaiisEts, wīátl-tsa
and then he sought his guardian spirit. Always

kw's wä-ē stauQs tE sEyél tE
they kept ready the parents the

coqEs tE mEnas. HäHásEn tl'kelts
bed-his the son-their. Four moons

émē QEámEt, kw'sEs tsa mä-tlā-mē
he came home, while he was coming

lāk·^{u}Q é-tlās-Es-wä kwénits tE sákum
home then he took the cedar-bark

ē-tlas-Es-wä tlakuts nē tE kwÉlEs,
then he tied it upon the belly-his,

é-tlās-Es-wä kēkuts tE kwElEs.
then he bound the belly-his.

Snat tsa kwa k'swEtl-tátcEls QEámEt.
Night it was when he arrived home.

ē-wäcwEwī sE síEl, é-tlās-Es-wä
She was awake his mother, then

Qēts tE swéakus, é-tlās-Es-wä
she woke the husband-her, then

p'tämits: "Nōa?" "Énsa."
ask they: "Is that you?" "It is I."

é-tlās-Es-wä nEms námistQEs tE
Then they go they put him to the

wā́nut, ē-tō-hís ēmeákup E
bed, presently assembled together a

kuq mistḗmōq, nētl sō kwā́lEs
multitude of people, then spake

tE seláloq: "kwēítla hauwālEmatla
the old people: "Let us see you perform

swālwolus." Nētl sō sqēlic tE
young men." Then stood up the

swālwolus, nētl sō hauwālEms,
young men, then they perform,

nētl sō kwālEs tE swḗwolus:
then said the young man:

"Tō-yukwolsipātla!" nētl sō kwā́lEs
"Let the fire be made up!" then said

tE sElálōq: "yúkwolsip!" nams-tE
the old-people: "make up the fire! coming-to

QEtlqEtlam kwā nätstEm." nētl sō
appear some wonder." Then

umēs sqēlic nētl sō kwā́lEs:
he came he stood up then he said:

"Namátla kwÉnet kwa 'súma."
"Go get a kettle."

Nētl sō nam tE swā́wolus kwEnEtEs
Then went the young men took

tE 'súma, nētl sō QEénQEs nētl sō
the kettle, then they carry it then

tlā́kuts stEtás utE haiyuk, nētl sō
they set it near the fire, then

nams, nētl sō kwaiyélic stEtás
he went, then he danced close

atE 'suma. Tō-hís-tsa kw's-kwaiyélic,
to the kettle. A while he danced,

tsultsulántsa kwaiyélic, nētl tsa sō
from-end-to-end he danced, and then

QōkálEs,[1] ē-wā nētl tsa sō
water appeared, then he continued

kwaiyélic, nētl sō wélEs tE sákwai,
to dance, then appeared a salmon,

cáqEs. ēts kwa mē tō hís,
bed-his. When a little time had passed,

ēmēk'ap tE kEq mistḗnQ,
assembled a multitude of people,

é-tlās-Es-wä kwÉlEs te sīyálakwa:
then spake the old-people:

"TauhauwālEmatla swā́wolus."
"Let us see you perform young men."

é-tlās-wā sqḗliHs tE swā́wolas,
Then stood up the young-men,

é-tlās-wa hauwälEms, é-tlās-wā kwElEs
then they perform, then said

tsä swḗwolus: "Tō-yúktatla!"
the young man: "Let the fire be made up!"

é-tlās-wä kwÉlEs tE sīyálakwa:
then said the old-people:

"Yūktatla, ī-ē-tst-wā kwa
"Make up the fire, we are going to see some

tEtEán!" é-tlās-wä mēs, sqḗliHs,
wonder!" Then he came, he stood up,

ē-tlās-wä kwÉlEs: "NEmātla kwénit
then he said: "Go bring

kwa sçúma," é-tlas-wä nEm tE
a kettle," then went the

swā́wolus kwénitEs tE sçuma,
young men (and) took the kettle,

é-tlas-wä QEénQEs, tlákatEs stEtÉs
then they carry it, they set it near

tE haiyuk. é-tlās-wä nEms tó-tlā
the fire. Then went he

é-tlās-wEtl kwaiyḗleHs nē tE
and then began to dance around the

sçúma. Tōhís-tsa kw'skwaiyḗleHs,
kettle. Awhile he danced,

tsultsulántsa kwaiyéliHs, é-tlās-Es-wä
from-end-to-end he danced, and then

mēs wīl tE k·a. é-wiātl tsa
came to appear the water. He often

kwaiyéliHs tō-tla. ē-tlās-Es-wä mēs
danced that man. Then came

wīl tE sōk·wäi, ē-tlō kelát
appearing a salmon, yet again

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[1] The phrase nētl sō wīlEs tE ka could have been used here, but this expression is more idiomatic.

é-tlā kEla̍t wīl tE sa̍kai, nētl sō

then again appears a salmon, then

yEsa̍lis, nētl sō tcítEm sEnéyū

there were two, then they swam about

úta 'súma. Tō-hís kw's-qútEs tsa

in the kettle. Awhile they remain

nētl sē sō suq.

then disappear.

mē wīl tE-tlō sōk·wäi, ē-tlās-wä

came appearing another salmon, then

yⁱsa̍lis tE sṓk·wäi kw's-Hétems nē

two the salmon that swam about in

tE sçúma. Tōhís k'squtEstsa,

the kettle. Awhile they remain

é-nē-tlō-nEm-āl sōq.

then all disappear.

Cīyus ut·l Tsōqēlem.

History of Tsōqélem.

Tso qáqa ōqtca̍nEn stä kw's smīyus. tluk·ta̍mits, yémic qEa̍qa

He had magic power he ran like a deer. He was tall, he moved lightly

kw's émic, skwē kwEnsātlEmet kw's íémic. Kākaíit tE smistémuq,

when he walked, can't hear him when walking. He killed the people,

tla̍nk·^{u}tEs. Tsa kauwÉtsEn smant nētl lálEmps lalEm ut·l, yuq-spās.

he robbed them. The Cowitchin mountain was his home the home of a one-time-bear.

KEq skwolás sEnēwa lálEm ut·l spās, sEnéū tsa haíEtEns. Tō sīy-a̍luq

Lots of guns within house of bear, inside the ammunition. He was half-witted

qon slétlkutl, smútuksEn, klōwétsa, thúkwElâs qunEm unítl kw's étsums,

when a boy, running-nose, naked, heedless as to any clothing,

aúa kw's étltEns, émic útsa sa̍luk muk·^{u} skwa̍il, ts'tcima̍isEn,

without any food, roaming in the woods every day, dribbling-at-mouth,

tōtláwistEm tsä kúlEmps, tEtsa̍lmūq. Qaíyākwetstsen ca̍naqEs tE slétlEkEtl

shifty his eyes, as-an-animal's. Qaíyākwetstsen saw the boy

nÉtsa skwa̍il, nētl-so túlmuqs wā-tsā kwElEs tsa wā-émēs sēsāt

one day, then know-he what-kind-of-person will be when becomes grown-up

swéEka. "Oh! éi tsa kúluñs." "NEñána, Enátca Ená-tlā!" "Qona kwEn-siñ

man. "Oh! good his eyes." "My-boy, come here!" "Now go and get (me)

uks skwiláliñūq-qētltc." Kwa̍niñEt. TE swéEka ēyū-amut.

a blackberry-bush." He went for it. The man there was sitting.

Qīyana̍nus tca̍tcil tE swéEka, a̍kwEstEn, sō kwÉnEts.

He was smiling (the boy) he came to the man, he gave it to him, then he took it.

Sō kwEnEts tE slétlEkEtl, qōkwākäntEm qīyúnkustEm. Aúa

Then he seized the boy, threw him on his back and rubbed his face. Not

kw's sqams tE slétlEkEtl, ūänkumal, súqwom tsaa̍sus. "Kwa̍mkwum tEn

he cried the boy, only grinned, bleeding his face. "Strong your

kúlEm ōmē qútsa swéEka." Nētl sō kwäts, éi ckwa̍lawons staluk^{u}.

eyes become when a man." Then he went off, good his heart in the woods.

Qon ḗmic-wutl-tsátlumEtEs qēqunEm. Nētl-sō tlutcánEm. Nētl-sō cánuks
While he was walking he heard a barking. Then he cautiously walks. Then he sees

tE swḗEka ē tE stā́lEs ē tE mÉnEs. Kwenā́tEs tE mistémuq
a man and the wife-his and the child-their. He was clutching a human-being

tlaiyEqtEs. Cā́iEtEn tE sEā́sus. "Amḗtla! umut-tla." Nētl-sō
eating-him. Hairy the face-his. "Come here! and sit down (said he)!" Then

qēmuts tE slēuk ē ā́kwistEm tE slḗtlEkutl. KwEnEts. "TlaiEq't'tla!"
he clutched some flesh and gave it to the boy. He (the boy) took it. "Eat it!"

Nētl-sō tlaiEquts. "Ātc tsE qḗluq aíyū nē tsEn sa. Amḗtla, tlā́kusEt."
Then he ate it. "When you fight then there I will be. Come here, lie down."

Nētl sō tlakusEts tE slḗtlEkutl. "Aúa ḗiyis tsEn kúlEm. SḗtsEn sa tEn
Then lay down the boy. "Not good your eyes. Heal-I will your

kúlEm. Kw's sō nētl swḗEka yumk·usā́m aúa cúkus tsEn kúlEm. Aúa cúkus
eyes. When that man rubbed your face not finish your eyes. Not right

tsEn kúlEm." Nētl sō kwÉnEts tsa squtsalē. Nētl-sō mḗakuts útE
your eyes." Then took he a humming-bird. Then he pricked at-the

cwúlnuts tEn kúlEm. Sō sqā́mus. "Nēētctcuqunat tE skwḗyil?
side-of the eyes. Then it bled. "Can you see the sky?

aúa-kwoz cānuq tsa kwā́sEn wutl-súqwom?" "Nē-tcEn wutl-cā́nuq tsa
cannot you see the stars while-bleeding?" "I saw the

kwā́sEn." "Tlúkwilâs wā snā́tEs kwuskwantcinEm, klau-stäääl."
stars." "Careless if at-night you are running, just-as-in-daylight."

Nētl sō sōtâk·us. Nētl sō kwaiḗlic sō tcū́Ens: "ētsEn utl tÉna stā́lEm
Then he went home. Then he dances and sings:

mEstḗmuq yuqas kwEnas utl tÉna stā́mElEt qas ā ā ā." Nētl sō nämps
Then he goes to

LEmáltca. Tlētlā́ácin nonEtsa slā́ni nē utsa cätl wāwutlEtas
LEmaltca. They were feasting (there) one woman there in the doorway keeping-away

tE skwumkwumai. KwEnā́tEs tE skäluq. Sōqḗlem nūwḗlEm. SōqḗlEm
the dogs She held a clam-digger. SōqḗlEm sprang-inside. SōqḗlEm

kwíluctEs sEyā́isila mEstḗmuq. SoqḗlEm tcā́tlum. Tsä
shot two men. SōqḗlEm jumped about. That

slani sEélum útE cwā́mut. Nētl sō tā́tsEls stEtā́s
woman sprang upon the bed. Then came he near.

utúnsa. Nētl nE sō kwEnát qā́tlet tE skáluq. Netl sō
Then she held him across the chest with the root-digger. Then

tams: "Amḗtla! ḗtsEn wutl kwun-nuq, aúatcūq skwElácus kwa
she calls out: "Come here! I have got him, don't you bring a

umḗtūq, s'kūkwum'stcūq." Nētl sō tā́tsEls sE tā́lEs ē-yū-kwEnäm utsa
gun, axe you him." Then came her husband bringing an

'skūkwum. Kwā́kwuts tE sqaíus, nētl sō mḗuktā́wit. Nētl sō
axe. He struck him on the head, then cut-off-the-head. Then

tsátlums tE sluk·wats hēs kw's tsátlums.
jumping about the headless-body long-time it was jumping.

Story of TsōqēlEm.

About sixty years ago there lived at the foot of the mountain near Cowitchin Harbour a strange and fierce man named TsōqēlEm. He was taller than the average man by nearly a foot, his face was long and thin and his tread was as soft and stealthy as that of the mountain-lion, and he could run like a deer. He became the terror of the district, waylaying and robbing anyone who crossed his path. His home was a cave in the side of the mountain, in which he always kept a goodly supply of fire-arms and ammunition. From his boyhood he had been a strange being, passing most of his time roaming in the forest or mountains. His eyes were shifty and roving like those of a wild animal. A great Shaman once saw him at Saanich, and said to the people round about him: "That boy has got remarkable eyes." The boy stared at the man, and would have run away but the Shaman caught him, and bade the people get him some trailing blackberry brambles. With these he rubbed the boy's face, saying as he did so, "I hope your eyes will now keep strong." The boy's face was severely lacerated with the thorns of the brambles, but he did not cry, he simply grinned all the time, and when the Shaman let him go with the command: "Run!" he ran off by himself into the forest again.

TsōqēlEm now wandering through the forest, heard a noise before him like the growling of a dog over a bone. He crept stealthily forward and presently perceived a hairy forest monster who, with his wife and children, were devouring in dog-like fashion the body of a youth they had seized.

The monster held his victim on his knees, and with his long fierce claws tore off the flesh and passed it to his children. He accosted TsōqēlEm, bidding him sit down. TsōqēlEm sat down and the monster passed him some of the flesh. TsōqēlEm ate like the rest. The monster then said to TsōqēlEm, "When you fight and when you kill people I shall be with you. Come here to me and lie down. There is something in your eye. That Shaman did a good thing who rubbed your face, but he only half did his work; I will finish it." So saying he took the bill of a humming-bird and thrust it in the corner of the boy's eyes, telling him to look upwards till he could see the stars. From time to time he questioned him, "Can you see the stars yet?" TsōqēlEm answered "No" at first, but presently the stars became visible to him through the blood of his eyes, and he cried out: "Yes, I can see them now." "Very good," said the monster, desisting from his task; "from this time you will be able to see as well in the dark as in the light; day and night will be all the same to you." Tsōqēlem now went back to his cave home and danced and sang his mystery song: "ētsEn utl tEna stälEm qas! a! a! mustēmūq yuq qas kwenES. utl lumstalt qas! a! a!" which signified that he had been given human flesh to eat While he danced he flourished his gun and knife.

From this time onward TsōqēlEm went about the country killing and robbing the people. After many years of this life he one day went to the Semaltca people on Kuper Island. It was about spring time, and the people were all assembled together feasting in one of their long-houses. A young woman sat in the doorway holding her digging stick in her hand with which to keep out the dogs. All at once a gun went off and a man fell shot, and then another and TsōqēlEm was amongst them brandishing his weapons and killing all within his reach. Everybody made for the door except the young woman who held the digging stick. She sprang upon the bed platform, and as TsōqēlEm passed with his back towards her she was suddenly inspired with the thought that she could hold him down with her stick. Seizing her digging stick at both ends, she quickly passed it over his head and held it tightly across his breast and pulled him backwards, shouting as she did for her husband to come and kill him while she thus held him. TsōqēlEm struggled hard to break away from her and sought to stab her with his knife, but she held him fast and shouted the more. Her cries brought an old crone to the door, who called out, "Has he got you down?" "No," she replied; "I have got him down. Tell my husband to come quickly and bring the other men with him." The husband presently came, rushing up, followed by the other men. As they entered the house, the woman said, "Don't use your guns, attack him with your axes." This they did, soon disabling him; they then cut off his head and his body rolled and jumped about for a long time. When they cut him open they found that his heart and entrails were very small—much smaller than those of any ordinary man. Thus was TsōqēlEm slain by the wit and pluck of a woman.

KauítsEn ACCOUNT OF A GREAT FIGHT BETWEEN THE SALISH TRIBES AND THEIR HEREDITARY ENEMIES THE KWAKÍUTLS.

Once the KauítsEn were at war with the tribes on the American side of the Straits. While they were absent from their villages some of the Kwakíutl bands swooped down upon their settlements, burnt their houses and carried off the women and children into slavery. When the KauítsEn warriors came back they found their homes destroyed and their families carried off into slavery. Nothing was left to them but the smoking remnants of their dwellings. Not even a dog remained. They set their canoes to dry and then gathered for consultation. While the meeting was going on a youth from the Snanaímōq tribe came running up with information respecting the marauding tribes. This youth had seen their camp fires. Said he, "I saw five hundred and eighty cooking fires on the beach at Nanaimo, and I think they will stay there for a little while. If you hurry after them you can lay in ambush for them at the mouth of the harbour." The KauítsEn immediately sent out scouts to search all the bays between the KauítsEn Harbour and that of the Snanaímōq; they also sent off messengers to the other friendly Salish tribes with urgent requests to join them in their attack on the Kwakíutl. A ready response was made, and before the dawn of the next day the war canoes, each with its complement of thirty-five warriors, of all the Salish settlements on the Gulf and Islands rendezvoused at KauítsEn Harbour. The scouts had returned in the meantime with the news that the Kwakíutl were camped at Maple Bay with their canoes all hidden in the woods. When all the war canoes had arrived they set out for Maple Bay, forming their company into two divisions, one of which was stationed on the right and the other on the left of the entrance to the bay. It was agreed among them that three canoes of KauítsEn warriors disguised as women should row into the harbour and entice the Kwakíutl to come after them. A system of signals was also agreed upon. The sounds were to be those of the owl, the wolf, and the dog. The cry of the owl was to be given by the KauítsEn as soon as they saw they were perceived by the Kwakíutl, the sound of the wolf when the Kwakíutl swallowed the bait and began to pursue them, and the sound of the dog would be given by those in ambush outside of the harbour to signify that they were ready to dash in and surround the enemy. When all was ready the KauítsEn canoes with the men wearing big hats, such as the women commonly wore, to make them appear like women, entered the bay. Before they are half-way in they are discovered by the Kwakíutl, who launch their canoes and set off in pursuit. They give the signal and turn about and paddle back, followed eagerly and carelessly by the Kwakíutl who fail to observe the canoes of the Salish stealing in on either side of the bay. Presently when the Salish have got into the bay and surrounded them, they give their warwhoop and the Kwakíutl perceive that they have fallen into an ambush. The KauítsEn now close in upon the Kwakíutl, and a fierce battle begins which, the KauítsEn say, continued without intermission for four days and nights, and the waters of the bay became red with the blood of the slain. In the end fifteen canoes of the Kwakíutl broke through the cordon of the Salish and made for the open sea. Of these one was swamped off the point, three ran on a submerged reef and were wrecked and the rest were overtaken at Nanoose and their crews all slaughtered. During the battle the KauítsEn sang their war-song: "Hā hā · ā . ā yū - tsenukwat sen Qē Qē Qā hā ā ā. Behold we are the great serpent people!"

When the Salish had vanquished their foes, they determined to retaliate and to carry the war into the territories of the Kwakíutl and their allies. Accordingly they made for the settlements of the Sātlṓtlq (now Comox) whose fighting men had been among the Kwakíutl. The Sātlṓtlq, though properly Salish, were always regarded by the KauítsEn as Kwakîutl because of their alliance and sympathy with this stock. When the Sātlṓtlq women saw the canoes coming into the harbour they thought it was their own husbands and friends returning laden with the spoils of their foray, and ascended the roofs of their dwellings to dance and sing the song of welcome. Presently, when the canoes were at the landing they perceived their mistake and would have run away and hidden; but the many Salish slaves which they held, perceiving their countrymen in the canoes and surmising the object of their visit, seized upon both women and children and held them prisoners. The KauítsEns now came forward and bound all the Sātlṓtlq. After setting fire to the village, they took them away with them as slaves. From thence they went on to Cape Mudge, the home of the dreaded and warlike Yuḳwitltaq, the southernmost of the Kwakíutl proper, and did the same thing there. They then proceeded to Alert Bay to the chief settlement of the Kwakíutl, and this they served in the same way, pressing all the women and children into slavery. Thus the Salish tribes punished the Kwakíutl and their allies and so broke their power that from that time onward till the country passed into the hands of the whites they were free from the attacks of the Kwakíutl and could live in peace and security.

There is no doubt, I think, about the truth of the main features of this contest, but whether the Salish were as victorious as the KauítsEn relates may possibly be open to doubt.

CLAIRVOYANT POWER IN WOMEN.

The Indians everywhere believed in clairvoyant powers, and relate many instances of the exercise of such. The following is an example given me by Thomas James.

A hunter once lost his hunting knife. He did not discover his loss till he had brought home his game and shared it with his neighbours. The loss of his knife made him sad, and the people ask him why he is so sad after his successful hunt. He tells them he has lost his hunting knife, and one of them replies, " I know a wise old woman who will help you find your knife." The hunter was pleased to hear this, and said, " I will give her five blankets if she does." The old woman is sent for and told what has occurred, and begged to use her powers in the recovery of the lost knife. She replied, " I certainly used to have the power to see lost things, but I have not exercised it of late. I don't know if I can do it now, but I will try."

She thereupon sat down, closed her eyes, and began swaying her body. Presently she passed into a trance-like state, and when she recovered she was able to describe to the hunter where he had been, and just where he had dropped his knife. The hunter returned to the forest, retraced his steps to the spot indicated by the old woman, and there found his knife lying where she had seen it.

MEMOIR ON THE PIGMENTATION SURVEY OF SCOTLAND.[1]

BY JOHN GRAY, B.SC.

[WITH PLATES XXVII-XLVII.]

IN 1895 the author, who had been engaged in an historical investigation of the origin of the races of Scotland, conceived the idea that the somewhat scanty evidence of history with reference to the origin of the Picts might be usefully supplemented by anthropometric work on the living population. Acting on this suggestion, he submitted the scheme to Mr. J. F. Tocher, Secretary of the Buchan Field Club, and he and other members of the Buchan Field Club agreed to co-operate with the author in making anthropometric observations on the people of East Aberdeenshire, which was, in early historical times, one of the seats of the Picts. As a result of this co-operation, pigmentation statistics of about 3,000 adults and measurements of 169 adults were obtained at Mintlaw in August, 1895. Some time after this a pigmentation survey of about 14,000 school children was carried out by Mr. Tocher in co-operation with the author. The results of these observations were given in a paper read before the British Association at Dover, 1899, and the whole of the observations made in East Aberdeenshire were described in a joint paper by the author and Mr. Tocher published in the *Journal of the Anthropological Institute*, vol. xxx, 1900. In 1900 anthropometric observations were made by Mr. Tocher and the author at the Louach gathering, West Aberdeenshire. On this occasion pigmentation statistics of 361 males and 243 females, and measurements of 90 adult males, were obtained. These results were described in a paper read before the British Association at Bradford, A.D. 1900. In 1901 a proposition was made at the British Association meeting at Glasgow to form a Committee to carry out a Pigmentation Survey of the whole of the school children of Scotland, but as no financial support was received from the British Association, a committee was formed consisting of Sir William Turner, K.C.B., Edinburgh (Chairman), Professor R. W. Reid, M.D., Aberdeen, J. Gray, B.Sc., London (Recorder), and J. F. Tocher, F.I.C., Peterhead (Secretary). This Committee received financial assistance from the Royal Society Government Grant Committee. Mr. Tocher and the author proceeded conjointly to organise the survey. Scotland was divided into districts; schedules were drawn up; appeals sent out to the teachers; this work being done by Mr. Tocher and the author in cooperation. The duty of sending out the circulars to the schools, of receiving them when filled in by the teachers, of compiling the tables dealing with about half a million school children, was left to Mr. Tocher, because he was on the spot, and was carried out by him and the clerks under his supervision. A summary of the complete statistical tables, containing the percentages of each hair- and eye-colour and also the actual numbers of individuals in each category in each district, was supplied to the author by Mr. Tocher, and it is on these tables (I–IV) that the maps in this memoir are based, and these figures have also been used as the raw material for the calculations of divergence that have been made by the author (Table V) and represented in maps XLVI and XLVII.

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[1] This memoir is published by permission of Sir William Turner (Chairman), and Professor R. W. Reid, members of the Pigmentation Committee.

It should not be forgotten that perhaps the greatest credit for carrying out this survey is due to the school teachers of Scotland. Without their co-operation the work could not have been done with the limited financial resources at the disposal of the Committee. The teachers' patriotism and their desire to advance knowledge of the origin of their people was appealed to, and not in vain.

The scheme of hair- and eye-colours adopted was practically the same as the Proposed Standard given in the *Journal of the Anthropological Institute*, vol. xxx, pp. 105 and 106, with the exception that jet black hair was made a separate category.

It was recognised before the survey was started that standard colour cards would add greatly to the precision of the results, and one of the best firms in this country was applied to and made a strenuous attempt to reproduce the shades of samples by the three-colour photo-lithographic process. But the attempt was a failure. The investigations of Mr. Udny Yule[1] have since shown that the inconsistency among observers who classify different shades by the help of names only is much greater than was suspected. This means that small differences of intensity of pigmentation may not be significant of any real difference, and that all deductions from these small differences must be received with reserve. There can be no doubt, however, that valuable conclusions as to broad differences can be safely drawn from this Survey, and the results obtained, it is hoped, will be of considerable interest. No future pigmentation survey, however, should be carried out without the use of standard samples.

METHOD OF DRAWING THE MAPS.

The number of hair-colours noted in the observations was five, namely, fair, red, medium, dark, black, and the number of eye-colours noted was four, namely, blue, light, medium, and dark.

A separate map has been drawn to show the distribution of each of these hair- and eye-colours for boys, and also a similar series of maps for girls.

The method of drawing the maps will now be described. To fix ideas let us assume that a map is to be drawn to show the distribution of fair hair among boys. A sheet of tracing paper is placed over the key map, on which the number of each district is printed in the centre of the district.[2] The percentage of fair hair in each district is marked on the tracing paper over the number. If we assume that these numbers denote heights in a map of the physical features of a country, contour lines can be drawn on that assumption.

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[1] *Jour. Anthropological Institute*, vol. xxxvi, p. 325.

[2] The districts were selected so as to contain about the same numbers, and so as to lie, whenever possible, in the same river basin. The centres were found empirically.

The intervals between adjacent contour lines are determined by the following considerations. If samples of n persons are drawn at random from the population after it has been thoroughly mixed, the standard deviation σ of the number of fair-haired persons from the mean will be $\sigma = \sqrt{npq}$ where n equals the number of persons in the sample, p is the probability of a fair-haired person being drawn, and q the probability of some other coloured person being drawn. If σ is expressed as a percentage, the formula becomes

$$\sigma = \frac{1}{\sqrt{n}}\sqrt{\mathrm{P}\,(100-\mathrm{P})}$$

where P is the general percentage of fair-haired persons (including both boys and girls) for the whole of Scotland.

If the deviation of a random sample from the mean is more than[1] three times the standard deviation of all random samples, it is known that such a sample will not be drawn oftener than once in 1,000 times. If the odds are 1,000 to 1 against any sample being a random sample of a population which is all of the same stock, then it becomes probable that such sample belongs to a different stock. If a contour line is drawn for a distance of 3 σ from the mean, then all included within that contour line may be taken as probably belonging to the average type for Scotland, as far as relates to fair hair, while those who are outside that contour line may be taken as probably belonging to a different stock. A second degree of abnormality may be indicated by drawing a second contour line indicating a deviation of 6 σ from the mean. The chances are 1,000,000,000 to 1 against the samples outside this second contour line belonging to the normal stock. The difference D between the mean and the first contour line and between any two adjacent contour lines will be

$$\mathrm{D} = 3\,\sigma = \frac{3}{\sqrt{n}}\sqrt{\mathrm{P}\,(100-\mathrm{P})}$$

As it is desirable for the sake of comparison that the same means and the same contour lines should be used for both boys and girls, P will be taken as the general percentage for the whole of the school children, including both boys and girls, though the percentages for the two sexes differ by a few per cent.

The following table gives the general percentages for the whole of Scotland :—

	Fair.	Red.	Med.	Dark.	Black	Blue.	Light.	Med.	Dark.	Total number.
Boys	24·9	5·5	43·3	25·0	1·2	14·6	30·3	32·7	22·3	257,535
Girls	27·4	5·1	40·9	25·4	1·2	14·9	30·3	32·0	22·8	244,017
Mean	26·1	5·3	42·1	25·2	1·2	14·7	30·3	32·3	22·5	—

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[1] 3·1 times is more accurate.

Applying now the above formula (for which I have to thank Professor Karl Pearson) we can calculate the value of D for each hair- and eye-colour. The number n is taken as 2,000, which is somewhat below the average number of boys or girls in each district. The nearest whole number to the general mean is taken as the value of P.

If we exclude the large towns, the mean number n for each rural district will be about 1,800, but the values of D when n is taken as 1,800 are not perceptibly different from those obtained by making $n = 2{,}000$, since the next highest whole number has been taken in all cases.

Taking as an example the determination of the contour lines for fair-haired children, we find

$$\begin{aligned} \text{D} &= \frac{3}{\sqrt{n}}\sqrt{\text{P}(100-\text{P})} \\ &= \frac{3}{\sqrt{2000}}\sqrt{26(74)} \\ &= \frac{3}{44{\cdot}72}\sqrt{1924} \\ &= \frac{3 \times 43{\cdot}86}{44{\cdot}72} \\ &= 2{\cdot}9 \\ \text{say} &= 3 \end{aligned}$$

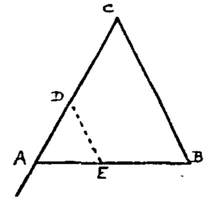
The maximum percentage of fair hair in any district being 36·9 and the minimum 19·7, the distribution of fair hair will be sufficiently represented by the following series of contour lines, of which the central line passes through, all points having the approximate mean value 26 :—

Contour lines for fair hair at 20, 23, *26*, 29, and 32.

The following table shows the contour lines for each hair- and eye-colour determined as explained above :—

	Mean.	Max.	Min.	Map mean.	D.	Contour lines.					
Fair hair ...	26·1	36·9	19·7	26	3	20	23	*26*	29	32	—
Red „ ...	5·3	7·7	3·1	5	2	—	3	*5*	7	—	—
Medium „ ...	42·1	51·0	30·0	42	4	34	38	*42*	46	50	—
Dark „ ...	25·2	32·1	18·8	25	3	19	32	*25*	28	31	—
Black „ ...	1·2	3·7	·3	1	1	—	—	*1*	2	3	—
Blue eyes ...	14·7	25·9	7·3	15	3	9	12	*15*	18	21	24
Light „ ...	30·3	42·7	20·9	30	4	22	26	*30*	34	38	—
Medium „ ...	32·3	38·2	20·9	32	4	24	28	*32*	36	40	—
Dark „ ...	22·5	29·2	17·2	23	3	17	30	*23*	26	29	—

To determine the points through which a contour line is to be drawn, it is best to use a graphic process for which a straight-edge, a set square, and a paper scale divided into 500 mm. are all that is necessary. Suppose we wish to determine a point through which a contour line 26 is to be drawn. Let us assume that there are two adjacent points A and B on the map marked respectively with percentages 25·6 and 27·3. These two points are in the first place joined by a straight line AB. AC is then set off at any convenient angle to represent $273 - 256 = 17$ on any scale, and $AD = 260 - 256$ on the same scale. If then DE is drawn parallel to CB, E is the point required. The construction can be carried out with the instruments mentioned, without drawing any lines on the map except the line joining AB. The edge of the paper scale is placed in any direction AC so that the point 256 of the scale coincides with the point A. The hypotenuse of the set square is placed so as to join the point 273 mm. on the scale with the second point on the map. Placing the straight edge against one of the shorter sides of the set square, the latter is slid along the straight edge till its hypotenuse coincides with 260 mm. on the scale. A line is then drawn passing through the point 260 mm., so as to intersect the line joining the two points on the map. This point of intersection is a point through which the contour line 26 passes.



It will be found advisable in drawing contour lines on a map to start from the points marked with the highest and the lowest percentages.

The five largest towns, Glasgow, Edinburgh, Leith, Dundee, Aberdeen, have not been included in the general system of contour lines. Each town, therefore, may be regarded, in accordance with the physical geography analogy, as an isolated block with perpendicular sides. This was found to be necessary because there is usually in large towns an immense difference between their pigmentation and that of the surrounding country. In rural districts there are usually no abrupt changes of this kind, and the distribution of pigmentation can be represented by a comparatively simple system of contour lines, as may be seen by an examination of the maps.

The intervals between the contour lines have been shaded according to a scheme, which makes readily obvious to the eye the various densities of pigmentation between the contour lines. No densities have been marked in figures except in the case of the large towns. If it is desired to know the exact percentage of a colour in any one of the 110 districts into which the country has been divided, that may be ascertained by the aid of the key map (XXVII) and the table of percentages (Tables I and II).

DETAILED DISCUSSION OF THE DISTRIBUTION OF PIGMENTATION AS SHOWN BY THE MAPS.

Maps XXVIII and XXIX. Fair hair.

The average percentage of boys with fair hair for the whole of Scotland is 24·9 per cent. It will be interesting to compare this percentage with that of the countries in which the highest percentage of fair hair is found, namely, North Germany and Scandinavia, because history records that considerable migrations took place from these countries to the British Isles. The Saxons, according to these records, came from North Germany, the Angles from Schleswig-Holstein, and, later, the Vikings came from Scandinavia. A comparison of the percentages of fair hair will show whether this Anglo-Saxon and Norse invasion resulted in a complete transformation of our population to the blonde type, assuming that the population was not of the blonde type before the invasion took place.

According to Virchow's survey, the percentage in Schleswig-Holstein of fair hair among school children (boys and girls) was 82; in the district of Lüneburg, lying directly south of Schleswig-Holstein, the percentage was 83, the highest known in any district of equal size in Europe, or indeed in the world. The percentage for the whole of Prussia is 72·4 (Virchow). Among the conscripts of the Swedish army Retzius found 75·3 per cent. with fair hair, and judging from experience in Germany and elsewhere the percentage among Swedish children would be considerably higher than this.

Comparing these figures with the 25 per cent. in Scotland, we are driven to the conclusion that the pure Norse or Anglo-Saxon element in our population is by no means predominant. There is evidently also a dark or brunette element which is at least equal in amount and probably greater than that of the Norse element.

Coming now to the detailed consideration of the distribution of fair hair as shown by Map XXVIII, we see at once that the greatest density of fair hair is to be found in the great river valleys opening on to the German Ocean, and also in the Western Isles. The Tweed, the Forth, the Tay, the Don, on the east coast, all show indications of the settlement of a blonde race, by a higher density of fair hair in their valleys or in those of their tributaries. This is probably due to the Anglo-Saxon invasions.

The Spey Valley has evidently received a large infusion of the blonde type. The highest percentage of fair hair (among boys) in Scotland is to be found at the mouth of the Spey. The Hebrides and opposite coasts have also a high percentage of fair hair. Both the Spey Valley and the Western Isles have probably acquired their blonde characteristics from the Viking invasions.

The distribution of fair hair in the case of girls (Map XXIX), shows the same general characters as in the case of boys. One or two special points are, however, worth noting. The highest percentage in Scotland of fair hair among girls is to be found in and around Dunfermline. Margaret, a Saxon princess about the time of the Norman Conquest, became the queen of Malcolm Canmore, who then had his court at Dunfermline. This suggests an interesting speculation. Many fair-haired Saxon ladies must have come in Margaret's train. Have the blonde characteristics of these fair ladies survived through the thirty to forty generations that have passed since their arrival in Dunfermline?

Karl Pearson has shown[1] that the hereditary resemblance between relatives of the same sex is greater than between members of the opposite sex. Pairs of relatives of the same sex are more alike than pairs of the opposite sex. This has been proved to be true for eye-colour, stature, head index and coat-colour, and no doubt is true for all characters, since all characters in man have so far been found to be more or less correlated. It follows that inheritance in a line through one sex is prepotent over inheritance in the same degree with a change of sex: that a man, in eye- and hair-colour, or in any other character, more closely resembles his paternal than his maternal grandfather; and a woman more closely resembles her maternal grandmother than her paternal grandmother. It is this law of separate inheritance by the two sexes, as if they were to a certain extent separate races, that makes it important to observe the differences in the distribution of pigmentation of the two sexes. In many of the earlier invasions of the British Isles, men with few, if any, women must have settled in the country, and taken to themselves wives from the native women of the country. If the natives differed considerably in any physical character from the male invaders, then we should expect to find this difference preserved more or less in the opposite sexes at the present day.

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[1] *Grammar of Science.* 2nd edition, p. 459.

It will be observed that in the Hebrides (especially in the southern islands) the percentage of fair hair is less for girls than for boys. The difference is not great, but if it is real and not due to the inconsistency of observers, it points to a settlement of blonde Norse invaders among a darker native population. In Orkney and Shetland there is a considerably higher percentage of girls with fair hair than of boys. This would imply that Norse women had been extensively settled in these islands. As the Norse were for a long time in peaceful occupation of these islands and they were not far distant from Norway, the extensive settlement of Norwegian women is probable.

The effect of an urban environment on the percentage of fair hair in the population has been investigated by several anthropologists. Shrubsall has found that the percentage of fair hair in slum districts of London, such as Southwark, is very much below the average. This agrees with what we find in Glasgow, where the average percentage is 21·7 for girls and 22·1 per cent. for boys; that is more than 4 per cent. below the average for Scotland. Dundee (24·8 for girls and 23·3 per cent. for boys) is also below the average for Scotland. In Leith the girls (27·5 per cent.) are above the average, and the boys (23·6 per cent.) are below the average; and in Aberdeen the girls (27·3 per cent.) are above average, and the boys (24·5 per cent.) are slightly below the average. In Edinburgh both the girls (26·6 per cent.) and the boys (26·3) are slightly above the average.

It would appear, therefore, that industrial towns like Glasgow and Dundee are unhealthy for the blonde type. In Dundee the conditions appear to be specially unfavourable to blonde men. In Leith the conditions also appear to be unfavourable to blonde men. In all these five large towns, in fact, except in Glasgow and Edinburgh, the blonde men appear less fitted to survive than the blonde women.

Of course, it must not be forgotten that these deviations from the normal in towns may not be wholly due to selective birth-rate and death-rate. It may be, in part, at least, due to selective immigration. Town life may have a greater attraction for the brunette than the blonde type. Whatever be the cause, certain towns, of the industrial type, appear to act as selective centres. It follows from this that the opinion promulgated by certain writers who have not studied the facts, that the improved facilities for locomotion in modern times have had the effect of making the population more homogeneous, is entirely erroneous. On the contrary, owing to the existence of selective centres, all improvements in transport apparently tend to make the population more heterogeneous.

Maps XXX and XXXI. Red hair.

The average percentage of red hair in Scotland (including boys and girls) is 5·3 per cent.; the percentage of red-haired boys (5·5) being slightly higher than that of red-haired girls (5·1). The variation in different parts of the country is not great, only three contour lines being required to show the whole distribution. Virchow found only ·3 per cent. in Prussia, but he admits that he considered the returns of red hair were too low. Baxter has recently found 5 per cent. of red hair among the peasants of North Dorsetshire, so that it is probable that there is not much difference between the percentages of red hair in Scotland and in England. Retzius found 2·3 per cent. among the Swedish conscripts, Livi found ·6 per cent. in Italy, and Ammon 1·7 per cent. in Baden.

The Maps XXX and XXXI show no very striking features in the distribution of red hair. There appears to be a slightly higher percentage round the coasts than in the interior. There is a patch of high density in the case of girls near the mouth of the Spey, and the N.W. corner of Scotland appears to have a high percentage in the case of both boys and girls. Judging from the European percentages given above, a very high percentage of either dark or fair hair means a small percentage of red hair. When the percentage of dark and fair is more nearly equal as in the British Isles, the percentage of red hair appears to increase. But the origin of red hair is a question that requires further investigation.

An examination of the percentages for the five large towns appears to show that urban conditions tend to increase the percentage of red hair among men, but does not perceptibly affect that among women.

Maps XXXII and XXXIII. Medium or brown hair.

Medium or brown hair includes all the lighter browns which at some distance from the observer appear brown and not black. The percentage (42·1) of brown-haired persons in Scotland is far larger than the percentages of other colours. Brown hair probably results from the thorough admixture of the blonde and dark types. The percentage (43·3) is rather higher among boys than among girls (40·9).

Comparing Scotland with other European countries, we find 21·6 per cent. in Sweden (conscripts), 26 per cent. in Prussia (school children), 60·1 per cent. in Italy (conscripts), 38·6 per cent. in Baden (conscripts). These figures appear to indicate that an excess of dark over fair is correlated with a high percentage of brown hair.

The distribution of brown hair in Scotland broadly supports this view. Among both boys and girls the highest percentages of brown hair are in the midlands and south of Scotland, and on certain parts of the east coast, not, however, closely associated with the great river valleys, and, therefore, probably not due to immigration. The highlands of the south, in Peebles and Selkirk, appear, from reasons difficult to explain, to have a high percentage of brown hair, and small percentages of fair and dark. In Ayrshire there is, in the case of girls, a higher percentage of brown hair than in the case of boys. Otherwise, the distribution of brown hair in the case of boys and girls corresponds very closely.

Round the ancient abbeys of Arbroath and Deer there appear isolated patches of high density of brown hair. These religious institutions, which existed for centuries and were recruited from distant lands, may have been the means of attracting an alien element to their neighbourhoods.

In the hinterland of Caithness there is a high percentage of brown hair, indicating the presence of a dark race driven inward by the later Norse invasions, but now considerably intermarried with the blonde invaders.

The high density of brown hair round the Beauly Firth is difficult to explain. Assuming that the Picts were a dark race, the presence of the king of the Picts at Inverness in the time of Columcille may perhaps have something to do with it.

In Renfrew, North Ayrshire, and the lower Clyde Valley, a considerable alien population has been induced to settle by the attraction of the coal, iron and other industries, and this must be taken into account in trying to explain the high density of brown hair in these districts.

The urban environment appears to be favourable to the survival of brown-haired men, since the percentage in all the five large towns is above the average for boys. In the case of girls the percentage is below the average except in the case of Glasgow and Dundee.

Maps XXXIV and XXXV. Dark hair.

Dark hair includes all the darkest browns which, at a moderate distance from the observer, look black.

In Scotland the percentage of dark-haired girls (25·4) is somewhat higher than the percentage of dark-haired boys (25·0). This tends to confirm the view that a blonde race of men (without women) invaded and intermarried with a darker native race. The percentage for Scotland when both boys and girls are included is 25·2.

To compare this with other countries we must add on the percentage (1·2) of black hair, as black hair is not stated in a separate category by European observers. The percentage for Scotland when these two categories are amalgamated is 26·4. Retzius found among the Swedish conscripts only 0·8 of this type, which again demonstrates how far the population of Scotland is from being a pure Anglo-Saxon or Norse type. In Prussia Virchow found 1·3 per cent. of this type among the school children; in Baden Ammon found 18·1 per cent.; and in Italy Livi found 31·1. This shows how the percentage of dark hair increases as we pass from Scandinavia to the south of Europe. But evidently we have to pass further south than Baden, in that part of Europe, to find a race with as high a percentage of dark hair as the Scotch. Further east we find in Upper Bavaria 24 per cent. of dark hair, but in Belgium (which is also exceptionally dark for its latitude) there is a much higher percentage than in Scotland.

Considering now the distribution of dark hair in Scotland as shown by Maps XXXIV and XXXV, we see that there is a close general resemblance between the distributions in the case of boys and girls. The region of maximum density is, in both cases, in the extreme west of Scotland. In the case of boys, this region is further south than in the case of girls. If we assume for reasons given above that the pigmentation of girls represents more nearly the pre-Norse inhabitants, this native type has been crowded into the Isle of Skye and the opposite coast of the mainland. If the Dalriadic Scots, who invaded Argyllshire in the fifth century, were a dark race, and the invaders who settled there were men only, that would account for the darkest region in the boys' map being in Argyllshire. The Hebrides have been so much affected by the Viking and other Norse invasions from Scandinavia which have passed round the north of Scotland, that they have a much smaller percentage of the dark type than the islands and mainland lying further east. The island of Lewis has a higher percentage of dark girls than boys, indicating the presence of a pre-Norse dark native population. The south-west corner of Scotland in both the boys' and the girls' maps is darker than the average; and since, in historical times, the Picts inhabited this region, this evidence points to the conclusion that the Picts were a dark race.

In the girls' map we have the same isolated patches of high density near Arbroath and in East Buchan, as were shown by the brown hair maps. This peculiarity is, however, not seen on the boys' map for dark hair.

In the midlands, from Glasgow to the Forth, there is a somewhat irregular distribution of regions of high density of dark hair.

The lowest percentage of dark hair is found in a district lying due south of Edinburgh extending through Midlothian, Selkirk and Peebles to the border.

The urban environment appears to be favourable to the survival of dark-haired women, for in all the five largest towns except Leith the percentage of dark-haired girls is higher than the average for Scotland. The dark-haired boys, on the contrary, are below the average in three towns, equal to the average in one, and above the average in one.

Maps XXXVI and XXXVII. Black hair.

Black hair includes all shades which are really jet black without any trace of brown. This colour of hair is very rare among North European peoples, though common enough among South European and Asiatic races. The percentage for the whole of Scotland is only 1·2 per cent., and is the same for both boys and girls.

There are no data for comparison with other countries.

In Scotland, the greatest density is in the central highlands and on the wild west coast. The boys' map shows this distribution more emphatically than the girls where the central region of high density is not so well marked.

In Glasgow the percentage is the same as for the whole of Scotland. Edinburgh, Leith and Aberdeen are below the average, while Dundee is above. These relations hold for both boys and girls.

It must not be forgotten that the boundary line between dark and jet black hair is very indefinite, and a considerable variation in the small percentage of black hair must on that account be due to the inconsistency of observers. Any conclusions deduced from the distribution of black hair must, therefore, be taken as subject to correction.

Maps XXXVIII and XXXIX. Pure blue eyes.

The category of pure blue eyes does not occur in the scheme of eye-colours employed by Beddoe, nor was it used in the observations made by the Buchan Field Club.[1] It was, however, used by Virchow in his survey of the German school children, and for the sake of comparison with the German results, it was considered desirable to include this category in the eye-colour scheme for the pigmentation survey of Scotland.

The percentage of pure blue eyes for the whole of Scotland (including boys and girls) is 14·7. Virchow found in Prussia 42·9 per cent. This again shows how large a percentage of the brunette type is mixed with the blonde type in Scotland. The percentage of pure blue eyes among girls, namely, 14·8, is only very slightly higher than that for boys, namely, 14·6.

The distribution of blue eyes in Scotland corresponds broadly with the distribution of fair hair, a result which was to be expected from the fact that there has always been found a fairly high correlation between them.

In the boys' map a very high density occurs in the lower Spey Valley and on the north side of the Beauly Firth. The Tweed, Forth, and Tay Valleys show high densities, as do also the north-west corner of Scotland, and the Hebrides. The highest density exists in East Lanarkshire in the coal and iron districts. This is probably due to the Irish immigrants, it being well known that blue eyes are very common among the Irish, as they are often associated with the darker as well as the lighter colours of hair. Here we have an example of the powerful influence of certain industrial conditions in effecting a change in the pigmentation of the population.

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[1] *Jour. Anthropological Institute*, vol. xxx, p. 104. 1900.

In the girls' map the same general distribution is seen, though the higher density in the east coast valleys is not so well marked. In the Spey Valley the density is quite as high for girls as for boys, suggesting the Norse invasion of the Spey Valley was a peaceful penetration, in which the Norse men brought their Norse women with them. The peak in East Lanark is not so prominent in the case of girls as of boys, which suggests that the Irish men immigrants have not generally brought Irish wives with them.

The urban environment has reduced the percentage of blue eyes below the average in all the large towns except Edinburgh, in the case of both boys and girls. In Leith and Glasgow the reduction is largest. This again shows how fatal the environment in large seaport and manufacturing towns is to the blonde type.

Maps XL and XLI. Light Eyes.

Light eyes include bluish grey and light grey eyes. There must necessarily be a considerable amount of inconsistency among different observers in drawing the line between pure blue eyes and light eyes, so that conclusions founded on small differences of percentage should be received with some reserve.

The general percentage for Scotland is 30·3 and is the same for boys and girls. No comparison can be made with Germany in this case, because Virchow's category of grey eyes is much wider.[1]

One of the most striking features on the maps is the high percentage of light eyes in Argyllshire, and in the islands of Jura and Islay. This has also a high percentage of dark hair, so that the Irish type with dark hair and light eyes must be predominant. This peculiarity may be inherited from the Dalriadic Scots who passed over from Ireland to this district in the fifth century.

Maps XLII and XLIII. Medium Eyes.

Medium eyes is a sort of residual category to take all those colours of eyes lying between dark and light eyes.

The general percentage for Scotland is 32·3, the percentage for boys, namely, 32·7, being rather higher than the percentage for girls, namely, 32·0.

There are few noteworthy features in the distribution of medium eyes as shown by the maps. The Peebles and Selkirk district has a large percentage of medium eyes (among boys) and we have seen that this district had also a large percentage of brown or medium hair. Scotland south of the Forth, the east coast districts, and Argyllshire on the west have high percentages of medium eyes.

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[1] See *Jour. Anthropological Institute*, vol. xxx, p. 105. 1900.

The urban environment appears to be favourable to medium eyes, most of the large towns having percentages above the average.

Maps XLIV and XLV. Dark Eyes.

This category includes brown and all darker shades of eyes.

The general average percentage for Scotland is 22·5, the percentage (22·8) for girls being somewhat higher than the percentage (22·3) for boys.

In Prussia Virchow found 24·5 per cent. of this type, and in Sweden, Retzius found only 4·5 per cent. In Italy, Livi found 69·1 per cent.

The distribution of dark eyes in Scotland by no means corresponds with that of dark hair. For example, the percentage in Argyllshire is low with a high percentage of dark hair, and in the Tay Valley the percentage is high with a high percentage of fair hair.

The urban environment appears to be very favourable to the dark-eyed type, all the percentages in the large towns for both boys and girls, with one exception, being higher than the average for Scotland.

Maps XLVI and XLVII. Divergence.

These maps are of quite a different character from those previously described, which illustrated the distribution of a single hair- or a single eye-colour. Map XLVI exhibits the distribution of deviations of the pigmentation of boys' hair from the average for Scotland, when account is taken of the whole five hair-colours. Map XLVII shows the distribution of deviations when the whole four eye-colours (of boys) are taken into account.

These maps have been drawn in accordance with a suggestion made to the author by Professor Karl Pearson, and promise to be of great value in giving a numerical estimate of the effect of environment on the physique of the population, or for indicating the presence of an alien race in any part of the country. The calculations involved in the making of these maps are somewhat laborious, but the result appears to justify the labour.

In order to draw divergence maps, numbers are first determined for each district, which indicate how often the observed frequencies, say of the hair-colours, in that district would be drawn as a random sample, from a population, in which the frequencies are the same as for the whole of Scotland. As the range of variation of these numbers would be too great to be represented on a map, their logarithms are marked in the centre of each district on the map. The contour lines are then drawn on the assumption that the numbers marked on the map represent heights.

For example, Glasgow is marked with the number 43·6. This signifies that if $10^{43·6}$ samples were drawn at random from a population having everywhere the same average frequency of hair-colours as the average frequency for the whole of Scotland, the special frequencies of the hair-colours in Glasgow would be drawn only once. In other words, the odds against the population of Glasgow being a random sample of the population of Scotland are $10^{43·6}$ to 1. These odds are enough and more than enough to establish the important conclusion, that the population of Glasgow[1] has been so much changed by an urban environment, and by alien immigration, that it can no longer, as a whole, be regarded as Scotch. The contour lines have been drawn at 3, 6, 9, 12, 15, and 18 degrees of abnormality or divergence. All the districts lying below the three contour lines are considered to have a population of the normal Scotch type, because in these districts the odds against their population being drawn as a sample from the general population is less than $10^3 = 1{,}000$ to 1. These odds are arbitrary, but they are usually selected by statisticians to mark the practical limits between the possible and the impossible.

The abnormality or divergence numbers marked on the map are $\text{Log}\,\frac{1}{\text{P}}$ where P is the probability of the sample observed occurring as a random sample of the general population. P is determined by formulæ due to Karl Pearson,[2] and tables of the values of P have been calculated from these formulæ by Palin Elderton.[3] For the purposes of the Memoir the values of P were taken from Elderton's tables as far as they went, but certain values were beyond the range of the tables, and these were calculated from Pearson's formulæ.

The first step in the process is the calculation of a function χ^2 for each district, χ^2 being separately calculated for hair-colours and eye-colours.

$$\chi^2 = \text{S}\left\{\frac{(m_r - m_r{}^1)^2}{m_r}\right\} = \text{sum}\left(\frac{\text{squares of the differences of theoretical and observed frequencies}}{\text{theoretical frequency}}\right)$$

The theoretical frequency of a hair- and eye-colour in a district is the number of persons that would have that colour if the distribution of pigmentation in the district was the same as for the whole of Scotland. For example, in Glasgow 41,526 boys were observed. If the distribution of pigmentation in Glasgow were the same as in the whole of Scotland, 24·9, or in round numbers 25 per cent.[4] of these boys would have fair hair, that is—

Theoretical frequency of fair hair in Glasgow

$$m_r = {\cdot}25 \times 41{,}526 = 10{,}381.$$

The theoretical frequencies of the remaining colours are calculated in the same way. The frequencies actually observed are subtracted from the theoretical frequencies calculated as above. The differences are squared and divided by the theoretical frequencies, and the quotients obtained are summed for all the colours. The sum obtained in this way is χ^2 for the district.

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[1] That is, of course, in so far as it is correctly represented by the school children observed.

[2] *Phil. Mag.*, vol. l, pp. 157–175. July, 1900.

[3] *Biometrika*, vol. i, p. 155.

[4] It might be possible for a very large district, with, say, a distribution of hair-colours identical with the standard distribution, to appear to differ significantly from that standard when the theoretical frequencies were calculated from percentages thus rounded off to the nearest unit or half unit. I have tested the rough work, however, against the use of more accurate proportions, in several instances, and find that no sensible difference has been made by my use of round numbers which very much lessened the arithmetic.

An example of the calculation of the value of χ^2 for hair-colours and for eye-colours is given below, for districts 13 (Glasgow), 44 (Edinburgh), 66 (Dundee), and 77 (Aberdeen). χ^2 is obtained by summing the values of $\frac{(m_r - m^1_r)^2}{m_r}$ for all the hair-colours and for all the eye-colours. A single χ^2 might have been calculated for the hair- and eye-colours combined, but it was considered desirable to deal with them separately for the purpose of comparing the results.

χ^2 having been calculated for each district, the probability P of the sample occurring in a homogeneous population may be found from Elderton's tables, or if χ^2 is beyond the range of the tables, may be calculated from the following formulæ:—

$$P = \sqrt{\frac{2}{\pi}} \int_{\chi}^{\infty} e^{-\frac{1}{2}\chi^2} d\chi + \chi \sqrt{\frac{2}{\pi}}\, e^{-\frac{1}{2}\chi^2} \tag{1}$$

when the number of categories $n^1 = 4$, as in the case of eye-colours, and

$$P = e^{-\frac{1}{2}\chi^2}\left(1 + \frac{\chi^2}{2}\right) \tag{2}$$

when the number of categories $n^1 = 5$, as in the case of hair-colours.

From formulæ (1), by neglecting the first term which becomes insensible for values of χ^2 above 30, we get

$$\text{Log}\,\frac{1}{P} = {\cdot}4343 \times \tfrac{1}{2}\chi^2 - (\bar{1}{\cdot}9019 + \log \chi)$$

and with this formula it is easy to calculate in the case of eye-colours Log $\frac{1}{P}$ for all values of χ^2 beyond the range of Elderton's tables.

From formula (2) we get

$$\text{Log}\,\frac{1}{P} = {\cdot}4343 \times \tfrac{1}{2}\chi^2 - \log\left(1 + \frac{\chi^2}{2}\right)$$

and from this formula it is easy in the case of hair-colours to calculate Log $\frac{1}{P}$ for any value of χ^2.

The values of χ^2 and Log $\frac{1}{P}$ for each district is given in Table V.

Map XLVI, showing the divergence or deviation from normal of the population of Scotland in the matter of hair-colours of boys, shows some interesting features. The unshaded districts which lie within the contour line 3 are inhabited by normal Scotch, in the sense that the odds are less than $10^3 = 1{,}000$ to 1, that any sample of the population drawn from these districts is not normal, *i.e.*, it may be taken as normal.

EXAMPLES OF THE CALCULATION OF χ^2 FOR GLASGOW, EDINBURGH, DUNDEE, AND ABERDEEN.

Boys.

District.		Hair colours.					χ^2	Eye colours.				χ^2
13.	m_r	10381	2284	17981	10381	498	—	6104	12582	13579	9260	—
	m'_r	9161	2227	18999	10658	481	—	4964	12679	13887	9996	—
	$m_r-m'_r$	1220	57	1018	277	17	—	1140	97	308	736	—
	$(m_r-m'_r)^2$	1488400	3249	1036324	76729	289	—	1299600	9409	94864	541696	—
	$\frac{(m_r-m'_r)^2}{m_r}$	143·38	1·42	57·63	7·39	·58	210·40	212·91	·75	6·99	58·50	279·15
44.	m_r	2454	540	4252	2455	118	—	1443	3211	2975	2190	—
	m'_r	2584	529	4220	2388	98	—	1484	2927	2992	2416	—
	$m_r-m'_r$	130	11	32	67	20	—	41	284	17	226	—
	$(m_r-m'_r)^2$	16900	121	1024	4489	400	—	1681	80656	289	51076	—
	$\frac{(m_r-m'_r)^2}{m_r}$	6·89	·22	·24	1·83	3·39	12·57	1·17	25·12	·10	23·32	49·71
66.	m_r	2188	481	3790	2188	105	—	1280	2652	2862	1952	—
	m'_r	2038	476	3964	2152	122	—	1270	2409	2950	2123	—
	$m_r-m'_r$	150	5	174	36	17	—	16	243	88	171	—
	$(m_r-m'_r)^2$	22500	25	30276	1296	289	—	256	59049	7744	29241	—
	$\frac{(m_r-m'_r)^2}{m_r}$	10·28	·05	7·99	·59	2·75	21·66	·20	22·27	2·71	14·98	40·16
77.	m_r	2921	643	5059	2922	140	—	1718	3541	3820	2606	—
	m'_r	2868	727	5061	2943	86	—	1494	3613	3908	2670	—
	$m_r-m'_r$	53	84	2	21	54	—	224	72	88	64	—
	$(m_r-m'_r)^2$	2809	7056	4	441	2916	—	50176	5184	7744	4096	—
	$\frac{(m_r-m'_r)^2}{m_r}$	·96	10·97	·00	·15	22·43	34·51	29·21	1·46	2·03	1·57	34·27

South of the Forth the inhabitants of Galloway and Dumfries and of the Lothians, Peebles, Selkirk, and Roxburgh are normal Scotch in the matter of boys' hair-colours. North of the Forth, Forfar, Kincardine, and East Aberdeenshire are normal. It is significant that most of these districts were seats of the Picts in the earliest historical times, from which we may infer that the Pictish element is predominant in the normal racial type in Scotland. The normal district running across from the Clyde to the Forth and Tay corresponds very closely with the seats of the ancient Dumnoni,[1] the same tribe which inhabited Devon and Cornwall, and therefore probably of the same Mongoloid Bronze Age race as the Picts themselves.

The same general distribution of the normal is shown by Map XLVII, the divergence map derived from boys' eye-colours. The normal districts in this case are, however, more restricted, owing probably to the fact that eye-colours have not been observed with the same precision as hair-colours.

Maps XLVI and XLVII are in very good agreement also with respect to large deviations from the normal type of the population. For example, large deviations from the normal appear in both maps in the district of the coal and iron industries in East Lanarkshire. The lower valley of the Spey in both maps shows large deviations, due, no doubt, to a Norse invasion or colonisation.

In the eye-colour map (XLVII) there is a unique deviation in East Inverness, to which there is nothing to correspond in the hair-colour map. The same holds for the Shetlands, and is sufficient to show that though the inhabitants of Orkney and Shetland happen to be normal in hair-colours, they are by no means of the same race.

The considerable deviations in West Argyle and in Islay and Jura suggest that the Scots who came over from Ireland in the fifth century differed considerably in type from the native Picts.

Glasgow shows an immense deviation from the normal both on the hair- and eye- colour map.

These divergence maps promise to be of great value in showing differences of race type, due either to selection by a new environment or to alien immigration. The method is specially adapted for the interpretation of pigmentation statistics, but it may also be applied to measurements of dimensions.

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[1] Rhys, *Celtic Britain*, p. 154.

TABLE I.

Boys.—Percentages in each district.

District No.	Hair.					Eyes.			
	Fair.	Red.	Med.	Dark.	Jet Black.	Pure Blue.	Light.	Med.	Dark.
1	28·18	5·81	40·54	23·89	1·58	13·50	28·47	33·99	24·04
2	31·74	7·59	38·10	21·07	1·50	25·86	20·86	27·43	25·85
3	22·19	5·66	48·00	23·11	1·04	14·36	27·48	36·68	21·48
4	24·61	4·15	42·04	27·82	1·38	15·10	31·97	30·08	22·85
5	27·77	5·02	40·21	25·47	1·53	12·81	31·26	33·98	21·95
6	25·54	5·87	42·43	24·79	1·37	10·12	32·12	35·49	22·27
7	25·83	4·96	41·21	26·84	1·16	12·43	29·45	37·64	20·48
8	28·79	6·65	40·42	22·70	1·44	12·07	39·98	30·79	17·16
9	29·16	4·84	40·53	24·36	1·11	11·17	34·77	33·05	21·01
10	22·29	4·91	51·05	21·20	0·55	12·71	30·32	37·72	19·25
11	21·83	4·96	47·64	24·42	1·15	12·37	29·59	36·44	21·60
12	23·68	6·06	41·76	27·86	0·64	11·30	34·24	33·38	21·08
13	22·07	5·36	45·75	25·66	1·16	11·96	30·53	33·44	24·07
14	22·93	5·43	43·11	27·58	0·95	14·67	29·53	31·46	24·34
15	22·42	6·35	48·07	22·04	1·12	10·46	33·37	37·30	18·87
16	25·92	5·69	40·96	26·93	0·50	17·42	26·06	35·35	21·17
17	24·97	5·60	42·21	26·00	1·23	14·54	34·30	31·21	19·95
18	25·46	5·28	44·24	22·73	2·29	15·61	27·22	33·69	23·48
19, 20 & 22	23·56	5·48	44·93	24·19	1·54	10·50	32·99	34·33	22·18
21	25·89	4·59	45·64	22·41	1·47	15·06	29·57	35·35	20·02
23 & 30	29·08	5·01	43·55	21·48	0·88	17·42	33·89	30·42	18·27
24	20·54	5·35	47·27	25·57	1·27	14·76	29·00	32·57	23·67
25	25·74	6·66	38·38	27·86	1·36	12·79	33·84	29·68	23·69
26	27·96	4·78	42·75	23·26	1·25	16·95	27·42	34·52	21·11
27	23·79	5·79	45·67	23·79	0·96	14·08	34·37	30·63	20·92
28	29·07	5·35	40·39	23·30	1·89	17·04	32·21	29·20	21·55
29	25·09	5·66	41·37	27·11	0·77	21·25	28·93	27·32	22·50
31	23·47	4·47	41·25	29·72	1·09	12·99	29·12	33·64	24·25
32 & 33	24·21	6·00	40·43	27·97	1·39	17·87	27·25	32·53	22·35
34	23·76	6·09	41·18	28·10	0·87	15·89	31·90	29·64	22·57
35	25·83	5·40	44·60	23·19	0·98	9·94	34·48	36·87	18·71
36	26·94	5·45	40·78	25·48	1·35	14·06	34·81	31·05	20·08
37	26·92	4·27	45·43	22·95	0·43	16·21	29·32	34·06	20·41
38	31·72	5·57	39·49	22·03	1·19	14·26	34·46	29·89	21·39
39	26·70	6·19	42·18	23·61	1·32	19·89	28·48	26·93	24·70
40	25·78	5·71	48·53	18·81	1·17	18·22	22·50	37·95	21·33
41	21·73	6·09	50·96	20·10	1·12	12·28	33·50	33·10	21·12
42	31·72	4·76	37·75	24·51	1·26	16·39	34·10	29·27	20·24
43	24·49	6·06	44·95	22·97	1·53	18·73	29·03	31·59	20·65
44	26·31	5·39	42·98	24·32	1·00	15·11	29·81	30·47	24·61
45	23·57	5·92	45·42	24·37	0·72	10·55	32·60	34·16	22·69
46	27·28	5·81	43·45	22·53	0·93	16·04	31·94	31·10	20·92
47	26·35	5·30	44·52	23·04	0·79	18·93	28·44	31·12	21·51
48	23·92	6·37	45·90	22·59	1·22	11·50	33·18	35·01	20·31
49	29·74	5·74	43·70	19·82	1·00	20·14	30·24	28·74	20·88
50	21·54	4·47	42·87	29·14	1·98	14·67	25·29	36·94	23·10
51	26·40	4·75	43·82	24·58	0·45	13·23	33·32	33·06	20·39
52	29·89	4·08	37·98	26·93	1·12	15·18	31·78	29·06	23·98
53	25·26	4·94	46·05	23·19	0·56	13·79	32·26	33·08	20·87
54	24·47	5·29	46·49	22·37	1·38	17·60	27·08	33·74	21·58
55 & 56	27·08	5·01	41·70	24·18	2·03	15·15	30·56	30·18	23·61
57	23·26	5·74	47·14	22·83	1·03	12·83	27·06	38·38	21·73
58	22·62	5·43	44·77	25·98	1·20	14·95	31·17	34·69	19·19

Boys. TABLE I.—*continued.*

District No.	Hair.					Eyes.			
	Fair.	Red.	Med.	Dark.	Jet Black.	Pure Blue.	Light.	Med.	Dark.
59	29·83	4·41	38·19	25·71	1·86	18·53	34·01	26·39	21·07
60	21·21	5·39	48·31	23·50	1·59	10·37	31·31	34·69	23·63
61	25·94	5·28	40·58	20·27	1·93	19·61	27·42	31·77	21·20
62	22·35	5·16	43·80	27·14	1·55	14·01	27·87	37·13	20·99
63	24·10	3·89	44·78	26·01	1·22	16·71	29·90	28·68	25·25
64	24·33	4·27	42·55	28·45	0·40	14·10	27·56	29·09	29·25
65	22·30	5·84	46·69	24·04	1·13	19·48	29·52	29·22	21·78
66	23·29	5·44	45·29	24·59	1·39	14·51	27·52	33·71	24·26
67 & 68	28·68	5·81	38·46	25·29	1·76	18·95	26·34	31·10	23·61
69	26·93	4·55	43·51	24·18	0·83	11·61	29·64	34·24	24·51
70	30·47	5·28	36·42	25·62	2·21	19·66	25·19	29·70	25·45
71 & 76	26·21	4·21	39·80	26·80	2·98	17·15	33·53	27·38	21·94
72	28·09	5·25	39·27	26·77	0·62	13·74	33·41	30·40	22·45
73	23·69	5·68	46·42	23·34	0·87	16·70	31·47	31·03	20·80
74	25·32	5·64	38·24	29·60	1·20	14·63	32·25	31·22	21·90
75	26·26	5·12	44·67	22·93	1·02	18·07	28·48	32·74	20·71
77	24·54	6·22	43·31	25·19	0·74	12·79	30·92	33·44	22·85
78	27·23	5·95	42·43	22·80	1·59	13·16	27·85	38·12	20·87
79	22·31	6·47	43·17	27·02	1·03	18·20	32·16	31·20	18·44
80	27·63	6·92	40·29	23·51	1·65	19·46	29·24	32·31	18·99
81	22·52	5·66	45·31	25·01	1·50	12·09	28·06	35·22	24·63
82	24·09	5·96	45·69	23·28	0·98	15·17	33·30	32·48	19·05
83	27·08	5·51	41·92	23·58	1·91	19·40	29·04	33·86	17·70
84	21·54	7·40	45·94	24·21	0·91	18·24	30·56	31·99	19·21
85	24·14	6·35	45·94	22·92	0·65	11·63	28·23	37·07	23·07
86	25·61	6·24	43·95	22·69	1·51	17·58	27·41	32·70	22·31
87	27·72	6·07	40·11	25·37	0·73	15·90	26·78	33·42	23·90
88	33·67	5·26	36·24	23·70	1·13	23·26	26·77	26·40	23·57
89	26·18	6·19	46·33	20·23	1·07	13·30	30·14	37·90	18·66
90	25·81	6·82	39·20	26·16	2·01	23·80	29·22	25·90	21·08
91	31·60	6·58	31·92	26·93	2·97	23·12	28·74	27·15	20·99
92	23·57	6·13	41·62	26·77	1·91	16·01	25·88	37·06	21·05
93 & 94	28·17	5·21	37·39	27·75	1·48	23·17	31·17	27·12	18·59
95	22·52	5·82	37·78	30·92	2·96	14·12	32·54	34·26	19·08
96	24·95	7·44	35·81	30·92	0·88	21·23	24·46	30·63	23·68
97	28·68	6·10	35·48	26·63	3·11	12·08	26·98	36·01	24·93
98	19·68	5·76	47·52	25·71	1·33	13·74	30·59	32·09	23·58
99	27·04	5·63	34·77	30·24	2·32	17·70	32·04	27·97	22·29
100	27·93	5·53	33·55	30·41	2·58	17·05	33·82	29·31	19·82
101	23·45	5·62	38·68	30·86	1·39	11·65	36·07	32·49	19·79
102	23·92	3·85	35·20	35·84	1·19	11·92	42·71	26·95	18·42
103	24·05	4·70	41·38	28·33	1·54	17·81	26·02	35·69	20·48
104	20·37	6·44	45·62	25·60	1·97	11·43	31·28	35·00	22·29
105	28·36	4·66	38·38	27·01	1·59	17·28	31·46	27·77	23·49
106	29·03	3·53	43·65	22·78	1·01	8·67	32·56	38·21	20·56
107	26·32	3·08	39·75	29·58	1·27	19·06	31·40	28·49	21·05
108	27·74	4·64	41·51	24·43	1·68	19·94	30·50	28·35	21·21
109	28·14	5·03	40·79	24·70	1·34	17·58	30·63	34·41	17·38
110	27·10	6·65	39·45	25·27	1·53	25·86	24·03	27·90	22·21
Whole of Scotland.	**24·95**	**5·50**	**43·28**	**25·03**	**1·24**	**14·64**	**30·32**	**32·73**	**22·31**

TABLE II.

Girls.—Percentages in each district.

District No.	Hair.					Eyes.			
	Fair.	Red.	Med.	Dark.	Jet Black.	Pure Blue.	Light.	Med.	Dark.
1	30·08	5·67	37·07	26·14	1·04	14·57	28·86	33·26	23·31
2	33·68	6·09	38·52	20·54	1·17	21·20	28·39	23·85	26·56
3	27·28	5·12	44·05	22·68	0·87	15·12	29·32	36·10	19·46
4	26·37	5·68	41·58	25·21	1·16	18·84	26·85	30·82	23·49
5	30·72	5·42	37·64	25·09	1·13	13·20	31·52	32·34	22·94
6	29·19	4·92	41·30	23·70	0·89	10·92	33·69	33·60	21·79
7	28·62	5·71	40·47	24·42	0·78	13·20	29·19	35·38	22·23
8	31·57	5·50	40·41	21·12	1·40	18·97	31·57	31·79	17·67
9	27·55	4·38	41·03	26·05	0·99	12·36	34·72	29·06	23·86
10	29·26	4·82	44·13	21·46	0·32	13·02	31·67	33·84	21·46
11	25·31	5·33	42·75	25·37	1·04	11·82	28·64	36·18	23·36
12	25·68	6·22	40·74	26·03	1·33	12·14	36·00	30·50	21·36
13	21·75	4·91	44·08	28·04	1·22	12·52	30·13	33·03	24·32
14	25·41	4·13	42·26	27·37	0·83	15·26	30·77	30·37	23·60
15	22·72	5·71	48·29	22·51	0·77	10·11	32·96	35·33	21·60
16	28·91	4·08	37·47	28·58	0·96	10·17	30·50	36·99	22·34
17	24·71	4·76	41·68	27·74	1·11	11·18	32·64	34·16	22·02
18	24·14	5·26	41·93	26·34	2·33	17·19	27·12	31·50	24·19
19, 20 & 22	24·92	5·24	43·74	24·62	1·48	9·66	34·03	31·79	24·52
21	24·47	4·34	45·02	24·90	1·27	17·80	24·89	34·85	22·46
23 & 30	29·89	5·40	40·24	23·18	1·29	17·92	32·85	29·38	19·85
24	21·62	5·05	44·51	27·91	0·91	14·30	29·47	33·39	22·84
25	26·75	4·76	41·18	26·83	0·48	14·26	34·25	29·33	22·16
26	32·71	5·44	39·63	21·11	1·11	18·27	28·50	33·22	20·01
27	22·84	4·33	47·47	24·63	0·73	13·32	34·01	30·95	21·72
28	31·13	4·84	38·45	24·54	1·04	17·95	32·41	28·10	21·54
29	30·06	4·47	41·16	22·68	1·63	17·81	23·56	37·37	21·26
31	28·01	5·01	39·80	25·90	1·28	15·28	28·21	32·68	23·83
32 & 33	28·20	5·06	37·52	27·70	1·42	19·29	28·75	28·70	23·26
34	28·41	4·93	38·83	26·50	1·33	14·87	34·49	29·65	20·99
35	27·88	4·49	40·62	26·00	1·01	11·08	34·76	33·31	20·85
36	34·08	4·93	36·42	23·08	1·49	12·14	34·48	33·51	19·87
37	32·24	4·76	39·90	22·11	0·99	16·39	30·34	31·91	21·36
38	32·87	5·43	38·60	21·82	1·28	14·51	32·68	28·13	24·68
39	30·41	5·91	38·36	23·92	1·40	17·81	29·45	28·44	24·30
40	28·54	5·86	45·08	19·38	1·13	17·77	25·43	36·01	20·79
41	24·80	4·98	47·36	22·05	0·81	12·20	32·01	34·35	21·44
42	34·69	5·01	36·57	22·79	0·94	16·29	34·22	29·44	20·05
43	30·99	5·35	38·18	24·59	0·89	17·50	31·58	29·50	21·42
44	26·61	4·98	41·14	25·84	1·43	14·75	29·85	30·75	24·65
45	27·53	4·97	41·99	24·89	0·62	11·04	32·88	34·53	21·55
46	30·14	6·08	41·43	21·73	0·62	15·34	30·58	32·00	22·08
47	31·68	5·78	42·49	19·28	0·77	17·80	29·66	31·78	20·76
48	28·73	5·67	40·95	23·92	0·73	13·41	30·62	34·43	21·54
49	34·73	4·44	38·49	21·40	0·94	18·91	33·18	25·57	22·34
50	28·29	4·57	41·42	24·83	0·89	10·02	28·40	34·97	26·61
51	29·59	4·19	42·14	23·68	0·40	12·50	33·72	33·14	20·64
52	36·89	3·38	35·91	23·14	0·68	18·48	28·98	27·99	24·55
53	29·96	5·25	42·28	21·99	0·52	13·79	32·31	33·39	20·51
54	30·89	4·86	42·71	20·72	0·82	16·61	27·82	33·13	22·44
55 & 56	31·25	5·39	36·20	25·55	1·61	14·82	30·07	29·01	26·10
57	27·15	4·53	43·35	24·38	0·59	13·71	25·88	37·38	23·03
58	26·77	5·82	40·24	25·90	1·27	14·82	31·39	33·15	20·64

Girls. TABLE II.—*continued.*

District No.	Hair.					Eyes.			
	Fair.	Red.	Med.	Dark.	Jet Black.	Pure Blue.	Light.	Med.	Dark.
59	30·61	4·64	38·07	24·50	2·18	17·98	36·96	25·03	20·03
60	24·97	4·01	46·39	23·83	0·80	11·01	29·51	34·38	25·10
61	32·06	4·90	36·77	24·76	1·51	19·80	28·35	28·60	23·25
62	25·06	4·15	43·46	25·35	1·98	15·26	26·70	36·26	21·78
63	23·01	4·16	43·29	28·61	0·93	15·45	29·71	29·88	24·96
64	22·69	5·11	40·92	30·15	1·13	11·18	29·17	29·99	29·66
65	24·23	5·35	46·02	23·21	1·19	18·32	27·59	29·75	24·34
66	24·76	5·04	42·29	26·48	1·43	14·00	28·45	33·03	24·52
67 & 68	31·79	5·52	37·22	23·68	1·79	18·63	26·27	30·10	25·00
69	27·99	4·92	43·01	23·47	0·61	12·89	28·60	35·13	23·38
70	35·09	6·04	29·83	26·12	2·92	22·13	24·95	26·80	26·12
71 & 76	29·30	4·71	35·84	27·97	2·18	18·06	33·10	28·32	20·52
72	30·81	3·95	40·69	23·23	1·32	15·32	31·80	28·00	24·88
73	28·26	5·86	42·53	22·31	1·04	17·30	34·40	26·28	22·02
74	32·30	6·81	34·45	25·32	1·12	16·02	33·76	31·44	18·78
75	31·23	6·31	36·62	24·01	1·83	17·50	27·47	31·43	23·60
77	27·29	5·58	40·82	25·62	0·69	13·93	28·84	33·68	23·55
78	29·41	5·71	40·39	23·25	1·24	13·06	29·53	37·27	20·14
79	29·39	5·40	37·43	26·43	1·35	16·53	34·98	28·23	20·26
80	33·33	5·84	35·68	23·65	1·50	19·72	31·87	29·62	18·79
81	25·39	4·86	40·83	27·42	1·50	13·53	27·24	33·72	25·51
82	30·17	4·74	40·55	23·47	1·07	13·81	31·59	33·73	20·87
83	31·30	5·56	38·72	22·72	1·70	17·82	29·59	32·24	20·35
84	25·73	4·45	45·79	22·12	1·91	16·96	31·87	30·53	20·64
85	27·48	6·42	43·00	22·54	0·56	10·42	29·14	35·94	24·50
86	29·78	6·90	39·91	21·92	1·49	20·44	26·55	30·92	22·09
87	32·68	5·77	38·82	21·70	1·03	17·78	27·73	31·91	22·58
88	33·53	5·20	35·58	23·98	1·71	22·13	24·64	29·12	24·11
89	28·71	5·22	42·13	23·31	0·63	14·22	27·99	37·18	20·61
90	32·11	7·67	35·20	23·27	1·75	22·60	27·11	29·44	20·85
91	34·69	6·88	30·39	26·19	2·65	23·65	27·07	26·30	22·98
92	25·22	4·68	39·27	29·61	1·22	18·30	27·74	32·28	21·68
93 & 94	31·36	5·18	34·76	26·61	2·09	22·63	31·84	27·60	17·83
95	26·70	4·05	37·59	29·78	1·88	13·84	29·38	32·84	23·94
96	34·93	5·21	36·04	22·72	1·10	22·62	29·03	24·53	23·82
97	31·81	4·85	34·34	26·40	2·60	14·43	29·68	32·29	23·60
98	25·55	4·21	45·24	23·90	1·10	13·38	31·22	29·85	25·55
99	31·17	3·93	31·81	30·97	2·12	19·70	30·46	26·40	23·44
100	28·83	5·38	30·05	32·08	3·66	16·95	31·78	30·56	20·71
101	26·12	4·91	37·69	29·88	1·40	12·89	34·09	33·39	19·63
102	27·04	5·66	35·33	30·50	1·47	14·05	38·99	27·04	19·92
103	27·88	4·25	38·54	27·02	2·31	16·71	29·83	31·63	21·83
104	25·11	5·48	40·89	26·93	1·59	12·19	32·24	33·76	21·81
105	30·15	3·34	34·95	30·01	1·55	16·58	33·49	27·41	22·52
106	31·71	3·13	41·86	22·98	0·32	7·34	35·60	35·38	21·68
107	21·94	6·54	43·25	25·74	2·53	20·89	35·44	20·89	22·78
108	28·30	5·03	38·70	25·84	2·13	20·58	27·41	30·03	21·98
109	32·59	4·95	38·23	23·04	1·19	18·26	29·92	33·39	18·43
110	33·48	5·67	36·14	23·12	1·59	25·16	24·09	27·46	23·29
Whole of Scotland.	**27·43**	**5·09**	**40·91**	**25·36**	**1·21**	**14·85**	**30·31**	**32·03**	**22·81**

TABLE III.

Boys.—Actual numbers in each district and in each category.

District No.	Hair.					Eyes.				Distric Totals.
	Fair.	Red.	Med.	Dark.	Black.	Blue.	Light.	Med.	Dark.	
1	572	118	823	485	32	274	578	690	488	2,030
2	464	111	557	308	22	378	305	401	378	1,462
3	533	136	1,153	555	25	345	660	881	516	2,402
4	391	66	668	442	22	240	508	478	363	1,589
5	963	174	1,394	883	53	444	1,084	1,178	761	3,467
6	931	214	1,547	904	50	369	1,171	1,294	812	3,646
7	536	103	855	557	24	258	611	781	425	2,075
8	260	60	365	205	13	109	361	278	155	903
9	765	127	1,063	639	29	293	912	867	551	2,623
10	286	63	655	272	7	163	389	484	247	1,283
11	837	190	1,826	936	44	474	1,134	1,397	828	3,833
12	664	170	1,171	781	18	317	960	936	591	2,804
13	9,161	2,227	18,999	10,658	481	4,964	12,679	13,887	9,996	41,526
14	650	154	1,222	782	27	416	837	892	690	2,835
15	360	102	772	354	18	168	536	599	303	1,606
16	360	79	569	374	7	242	362	491	294	1,389
17	388	87	656	404	19	226	533	485	310	1,554
18	579	120	1,006	517	52	355	619	766	534	2,274
19, 20 & 22	460	107	877	478	30	205	644	670	433	1,952
21	282	50	497	244	16	164	322	385	218	1,089
23 & 30	888	153	1,330	656	27	532	1,035	929	558	3,054
24	760	198	1,749	946	47	546	1,073	1,205	876	3,700
25	340	88	507	368	18	169	447	392	313	1,321
26	673	115	1,029	560	30	408	660	831	508	2,407
27	522	127	1,002	522	21	309	754	672	459	2,194
28	1,044	192	1,451	837	68	612	1,157	1,049	774	3,592
29	359	81	592	388	11	304	414	391	322	1,431
31	515	98	905	652	24	285	639	738	532	2,194
32 & 33	573	142	957	662	33	423	645	770	529	2,367
34	601	154	1,042	711	22	402	807	750	571	2,530
35	421	88	727	378	16	162	562	601	305	1,630
36	479	97	725	453	24	250	619	552	357	1,778
37	819	130	1,382	698	13	493	892	1,036	621	3,042
38	347	61	432	241	13	156	377	327	234	1,094
39	466	108	736	412	23	347	497	470	431	1,745
40	307	68	578	224	14	217	268	452	254	1,191
41	214	60	502	198	11	121	330	326	208	985
42	453	68	539	350	18	234	487	418	289	1,428
43	497	123	912	466	31	380	589	641	419	2,029
44	2,584	529	4,220	2,388	98	1,484	2,927	2,992	2,416	9,819
45	1,365	343	2,630	1,411	42	611	1,888	1,978	1,314	5,791
46	643	137	1,024	531	22	378	753	733	493	2,357
47	795	160	1,343	695	24	571	858	939	649	3,017
48	822	219	1,577	776	42	395	1,140	1,203	698	3,436
49	477	92	701	318	16	323	485	461	335	1,604
50	207	43	412	280	19	141	243	355	222	961
51	523	94	868	487	9	262	660	655	404	1,981
52	506	69	643	456	19	257	538	492	406	1,693
53	588	115	1,072	540	13	321	751	770	486	2,328
54	338	73	642	309	19	243	374	466	298	1,381
55 & 56	708	131	1,090	632	53	396	799	802	617	2,614
57	863	213	1,749	847	38	476	1,004	1,424	806	3,710
58	283	68	560	325	15	187	390	434	240	1,251
59	528	78	676	455	33	328	602	467	373	1,770

Boys. TABLE III.—*continued.*

District No.	Hair.					Eyes.				District Totals.
	Fair.	Red.	Med.	Dark.	Black.	Blue.	Light.	Med.	Dark.	
60	307	78	699	340	23	150	453	502	342	1,447
61	471	96	737	477	35	356	498	577	385	1,816
62	490	113	960	595	34	307	611	814	460	2,192
63	316	51	587	341	16	212	392	376	331	1,311
64	302	53	528	353	5	175	342	361	363	1,241
65	435	114	911	469	22	380	576	570	425	1,951
66	2,038	476	3,964	2,152	122	1,270	2,409	2,950	2,123	8,752
67 & 68	651	132	873	574	40	430	598	706	536	2,270
69	645	109	1,042	579	20	278	710	820	587	2,395
70	358	62	428	301	26	231	296	349	299	1,175
71 & 76	405	65	615	414	46	265	518	423	339	1,545
72	364	68	509	347	8	178	433	394	291	1,296
73	271	65	531	267	10	191	360	355	238	1,144
74	296	66	447	346	14	171	377	365	256	1,169
75	308	60	524	269	12	212	334	384	243	1,173
77	2,868	727	5,061	2,943	86	1,494	3,613	3,908	2,670	11,685
78	480	105	748	402	28	232	491	672	368	1,763
79	369	107	714	447	17	301	532	516	305	1,654
80	703	176	1,025	598	42	495	744	822	483	2,544
81	406	102	817	451	27	218	506	635	444	1,803
82	416	103	789	402	17	262	575	561	329	1,727
83	511	104	791	445	36	366	548	639	334	1,887
84	332	114	708	373	14	281	471	493	296	1,541
85	631	166	1,201	599	17	304	738	969	603	2,614
86	271	66	465	240	16	186	290	346	236	1,058
87	530	116	767	485	14	304	512	639	457	1,912
88	537	84	578	378	18	371	427	421	376	1,595
89	317	75	561	245	13	161	365	459	226	1,211
90	295	78	448	299	23	272	334	296	241	1,143
91	298	62	301	254	28	218	271	256	198	943
92	346	90	611	393	28	235	380	544	309	1,468
93 & 94	535	99	710	527	28	440	591	515	353	1,899
95	236	61	396	324	31	148	341	359	200	1,048
96	255	76	366	316	9	217	250	313	242	1,022
97	489	104	605	454	53	206	460	614	425	1,705
98	222	65	536	290	15	155	345	362	266	1,128
99	466	97	599	521	40	305	552	482	384	1,723
100	303	60	364	330	28	185	367	318	215	1,085
101	288	69	475	379	17	143	443	399	243	1,228
102	261	42	384	391	13	130	466	294	201	1,091
103	343	67	590	404	22	254	371	509	292	1,426
104	351	111	786	441	34	197	539	603	384	1,723
105	676	111	915	644	38	412	750	662	560	2,384
106	288	35	433	226	10	86	323	379	204	992
107	145	17	219	163	7	105	173	157	116	551
108	544	91	814	479	33	391	598	556	416	1,961
109	565	101	819	496	27	353	615	691	349	2,008
110	371	91	540	346	21	354	329	382	304	1,369
Whole of Scotland.	64,255	14,153	111,470	64,459	3,198	37,714	78,086	84,278	57,457	257,535 Boys.
Percentages.	24·95	5·50	43·28	25·03	1·24	14·64	30·32	32·73	22·31	

TABLE IV.

Girls.—Actual numbers in each district and in each category.

District No.	Hair.					Eyes.				District Totals.
	Fair.	Red.	Med.	Dark.	Jet Black.	Pure Blue.	Light.	Med.	Dark.	
1	520	98	641	452	18	252	499	575	403	1,729
2	459	83	525	280	16	289	387	325	362	1,363
3	628	118	1,014	522	20	348	675	831	448	2,302
4	385	83	607	368	17	275	392	450	343	1,460
5	1,003	177	1,229	819	37	431	1,029	1,056	749	3,265
6	978	165	1,384	794	30	366	1,129	1,126	730	3,351
7	551	110	779	470	15	254	562	681	428	1,925
8	293	51	375	196	13	176	293	295	164	2,928
9	642	102	956	607	23	288	809	677	556	1,330
10	364	60	549	267	4	162	394	421	267	3,244
11	897	196	1,515	899	37	419	1,015	1,282	828	544
12	677	164	1,074	686	35	320	949	804	563	2,636
13	8,648	1,952	17,529	11,151	484	4,977	1,982	13,134	9,617	39,764
14	701	114	1,166	755	23	421	849	838	651	2,759
15	326	82	693	323	11	145	473	507	310	1,435
16	361	51	468	357	12	127	381	462	279	1,249
17	358	69	604	402	16	162	473	495	319	1,449
18	528	115	917	576	51	376	593	689	529	2,187
19, 20 & 22	490	103	860	484	29	190	669	625	482	1,966
21	231	41	425	235	12	168	235	329	212	944
23 & 30	881	159	1,186	683	38	528	968	866	585	2,947
24	762	178	1,569	984	32	504	1,039	1,177	805	3,525
25	332	59	511	333	6	177	425	364	275	1,241
26	770	128	933	497	26	430	671	782	471	2,354
27	470	89	977	507	15	274	700	637	447	2,058
28	1,049	163	1,296	827	35	605	1,092	947	726	3,370
29	444	66	608	335	24	263	348	552	314	1,477
31	570	102	810	527	26	311	574	665	485	2,035
32 & 33	674	121	899	662	34	461	687	686	556	2,390
34	640	111	875	597	30	335	777	668	473	2,253
35	385	62	561	359	14	153	480	460	288	1,381
36	595	86	636	403	26	212	602	585	347	1,746
37	948	140	1,173	650	29	482	892	938	628	2,940
38	333	55	391	221	13	147	331	285	250	1,013
39	478	93	603	376	22	280	463	447	382	1,572
40	302	62	477	205	12	188	269	381	220	1,058
41	244	49	466	217	8	120	315	338	211	984
42	443	64	467	291	12	208	437	376	256	1,277
43	625	108	770	496	18	353	637	595	432	2,017
44	2,593	485	4,008	2,518	139	1,437	2,908	2,996	2,402	9,743
45	1,602	289	2,443	1,448	36	642	1,913	2,009	1,254	5,818
46	684	138	940	493	14	348	694	726	501	2,269
47	943	172	1,265	574	23	530	883	946	618	2,977
48	943	186	1,344	785	24	440	1,005	1,130	707	3,282
49	516	66	572	318	14	281	493	380	332	1,486
50	254	41	372	223	8	90	255	314	239	898
51	516	73	735	413	7	218	588	578	360	1 744
52	601	55	585	377	11	301	472	456	400	1,629
53	691	121	975	507	12	318	745	770	473	2,306
54	413	65	571	277	11	222	372	443	300	1,337
55 & 56	795	137	921	650	41	377	765	738	664	2,544
57	923	154	1,474	829	20	466	800	1,271	783	3,400
58	366	73	505	325	16	186	394	416	259	1,255
59	521	79	648	417	37	306	629	426	341	1,702
60	374	60	695	357	12	165	442	515	376	1,498

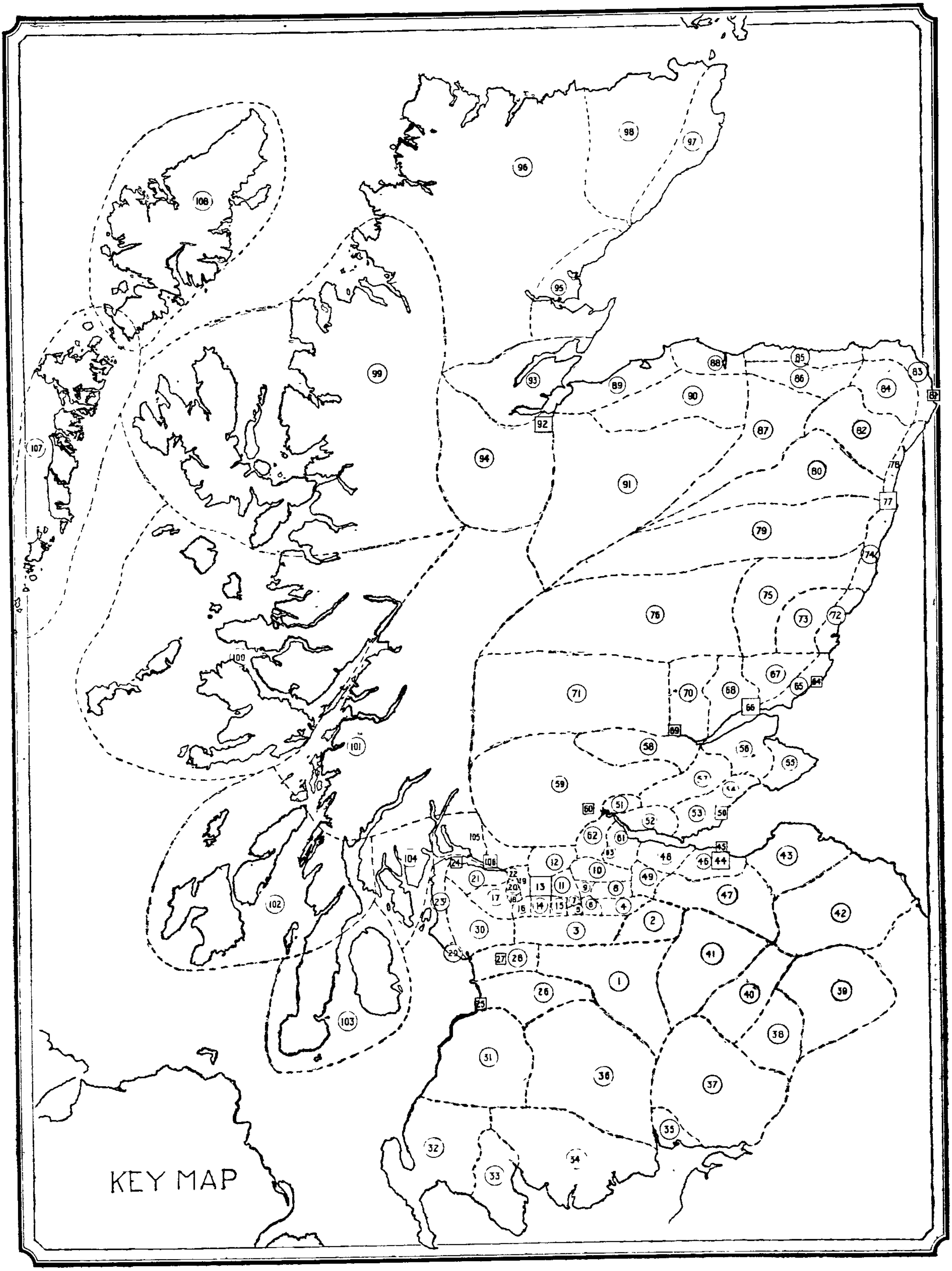
Girls. TABLE IV.—*continued.*

District No.	Hair.					Eyes.				District Totals.
	Fair.	Red.	Med.	Dark.	Jet Black.	Pure Blue.	Light.	Med.	Dark.	
61	510	78	585	394	24	315	451	455	370	1,591
62	519	86	900	525	41	316	553	751	451	2,071
63	271	49	510	337	11	182	350	352	294	1,178
64	280	63	505	372	14	138	360	370	366	1,234
65	426	94	809	408	21	322	485	523	428	1,758
66	2,084	424	3,560	2,229	120	1,178	2,395	2,780	2,064	8,417
67 & 68	674	117	789	502	38	395	557	638	530	2,120
69	643	113	988	539	14	296	657	807	537	2,297
70	360	62	306	268	30	227	256	275	268	1,026
71 & 76	417	67	510	398	31	257	471	403	292	1,423
72	374	48	494	282	16	186	386	340	302	1,214
73	299	62	450	236	11	183	364	278	233	1,058
74	365	79	400	294	13	186	392	365	218	1,161
75	307	62	360	236	18	172	270	309	232	983
77	2,903	594	4,342	2,725	73	1,482	3,068	3,582	2,505	10,637
78	520	101	714	411	22	231	522	659	356	1,768
79	457	84	582	411	21	257	544	439	315	1,555
80	754	132	807	535	34	446	721	670	425	2,262
81	439	84	706	474	26	234	471	583	441	1,729
82	509	80	684	396	18	233	533	569	352	1,687
83	569	101	704	413	31	324	538	586	370	1,818
84	364	63	648	313	27	240	451	432	292	1,415
85	728	170	1,139	597	15	276	772	952	649	2,649
86	341	79	457	251	17	234	304	354	253	1,145
87	634	112	753	421	20	345	538	619	438	1,940
88	509	79	540	364	26	336	374	442	366	1,518
89	319	58	468	259	7	158	311	413	229	1,111
90	385	92	422	279	21	271	325	353	250	1,199
91	314	55	275	237	24	214	245	238	208	905
92	350	65	545	411	17	254	385	448	301	1,388
93 & 94	600	99	665	509	40	433	611	528	341	1,913
95	270	41	380	301	19	140	297	332	242	1,011
96	349	52	360	227	11	226	290	245	238	999
97	465	71	502	386	38	211	434	472	345	1,462
98	279	46	494	261	12	146	341	326	279	1,092
99	484	61	494	481	33	306	473	410	364	1,553
100	284	53	296	316	36	167	313	301	204	985
101	298	56	430	341	16	147	389	381	224	1,141
102	258	54	337	291	14	134	372	258	190	954
103	387	59	535	375	32	232	414	439	303	1,388
104	412	90	671	442	26	200	529	554	358	1,641
105	660	73	765	657	34	363	733	600	493	2,189
106	294	29	388	213	3	68	330	328	201	927
107	104	31	205	122	12	99	168	99	108	474
108	506	90	692	462	38	368	490	537	393	1,788
109	573	87	672	405	21	321	526	587	324	1,758
110	378	64	408	261	18	284	272	310	263	1,129
Whole of Scotland.	66,925	12,432	99,817	61,891	2,952	36,237	73,964	18,157	55,659	244,017 Girls.
Percentages.	27 ·43	5 ·09	40 ·91	25 ·36	1 ·21	14 ·85	30 ·31	32 ·03	22 ·81	

TABLE V.

Boys.—Divergence.

District No.	Hair.		Eyes.		District No.	Hair.		Eyes.	
	χ^2	Log. 1/P.	χ^2	Log. 1/P.		χ^2	Log. 1/P.	χ^2	Log. 1/P.
1	16	2·5	8	1·3	57	26	4·5	48	9·7
2	58	11·1	186	39·3	58	4	0·4	7	1·1
3	24	4·1	19	3·6	59	38	6·9	49	9·9
4	11	1·6	5	0·8	60	20	3·3	22	4·2
5	23	3·9	11	1·9	61	13	1·9	36	7·1
6	3	0·3	65	13·3	62	16	2·5	20	3·8
7	7	0·9	26	5·0	63	8	1·0	14	2·5
8	12	1·8	43	8·6	64	16	2·5	35	6·9
9	26	4·5	42	8·4	65	12	1·8	50	10·1
10	35	6·3	19	3·6	66	22	3·7	40	8·0
11	35	6·3	32	6·3	67 & 68	32	5·7	43	8·6
12	23	3·9	38	7·6	69	11	1·6	23	4·4
13	210	43·6	279	59·4	70	38	6·9	38	7·6
14	14	2·1	7	1·1	71 & 76	55	10·5	25	4·8
15	21	3·5	43	8·6	72	16	2·5	7	1·1
16	10	1·4	19	3·6	73	6	0·7	6	0·9
17	1	0·0	13	2·3	74	8	1·0	2	0·2
18	29	5·1	11	1·9	75	4	0·4	12	2·1
19, 20 & 22	5	0·5	30	5·9	77	34	6·1	34	6·7
21	7	0·9	5	0·8	78	10	1·4	24	4·6
23 & 33	40	7·4	55	11·1	79	11	1·6	28	5·4
24	44	8·2	5	0·8	80	28	4·9	53	10·7
25	15	2·3	14	2·5	81	20	3·3	19	3·6
26	14	2·1	19	3·6	82	6	0·7	14	2·5
27	7	0·9	17	3·1	83	13	1·9	48	9·7
28	50	9·7	32	6·3	84	21	3·5	20	3·8
29	6	0·4	56	11·4	85	19	3·1	36	7·1
31	28	4·9	10	1·7	86	4	0·4	9	1·5
32 & 30	15	2·3	23	4·4	87	15	2·3	12	2·1
34	17	2.7	8	1·3	88	68	13·2	107	22·3
35	4	0·4	53	10·7	89	15	2·3	19	3·6
36	6	0·7	18	3·3	90	15	2·3	82	16·9
37	37	6·7	12	2·1	91	74	14·5	47	9·5
38	28	4·9	10	1·7	92	11	1·6	21	4·0
39	6	0·7	57	11·6	93 & 94	30	5·3	123	25·9
40	26	4·5	45	9·0	95	50	9·4	8	1·3
41	28	4·9	8	1·3	96	35	6·3	44	8·9
42	37	6·7	17	3·1	97	85	16·8	25	4·8
43	8	1·0	27	5·2	98	18	2·9	2	0·2
44	13	1·9	50	10·1	99	68	13·2	24	4·6
45	24	4·1	82	16·9	100	58	11·1	16	2·9
46	12	1·8	9	1·5	101	24	4·1	25	4·8
47	12	1·8	44	8·9	102	73	14·3	69	14·2
48	20	3·3	45	9·0	103	11	1·6	24	4·6
49	32	5·7	41	8·2	104	27	4·7	16	2·9
50	17	2·7	14	2·5	105	34	6·1	31	6·1
51	12	1·8	12	2·1	106	16	2·5	37	7·3
52	36	6·5	11	1·9	107	12	1·8	11	1·9
53	17	2·7	6	0·9	108	14	2·1	49	9·9
54	8	1·0	13	2·3	109	12	1·8	35	6·9
55 & 56	24	4·1	6	0·9	110	12	1·8	144	30·3



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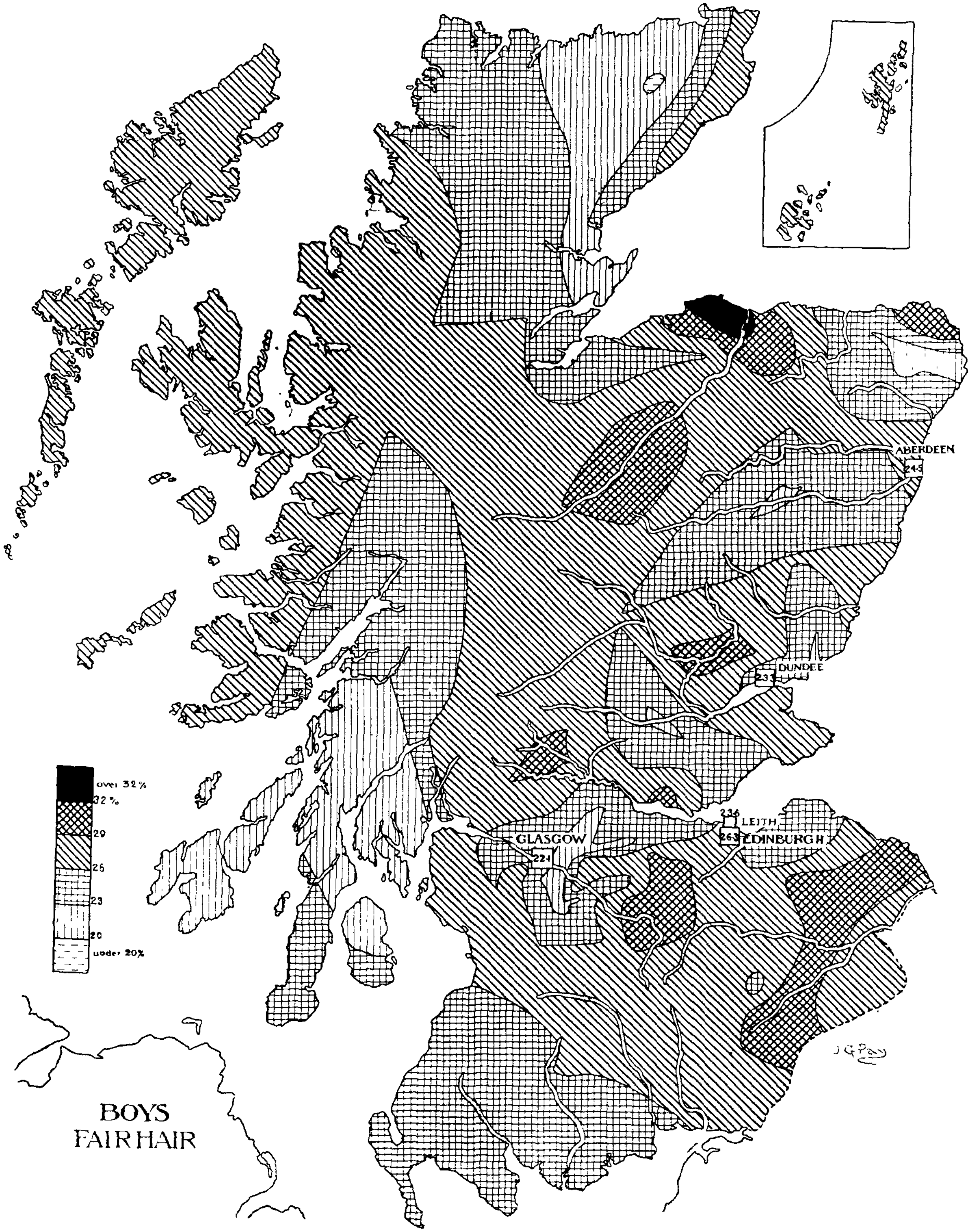

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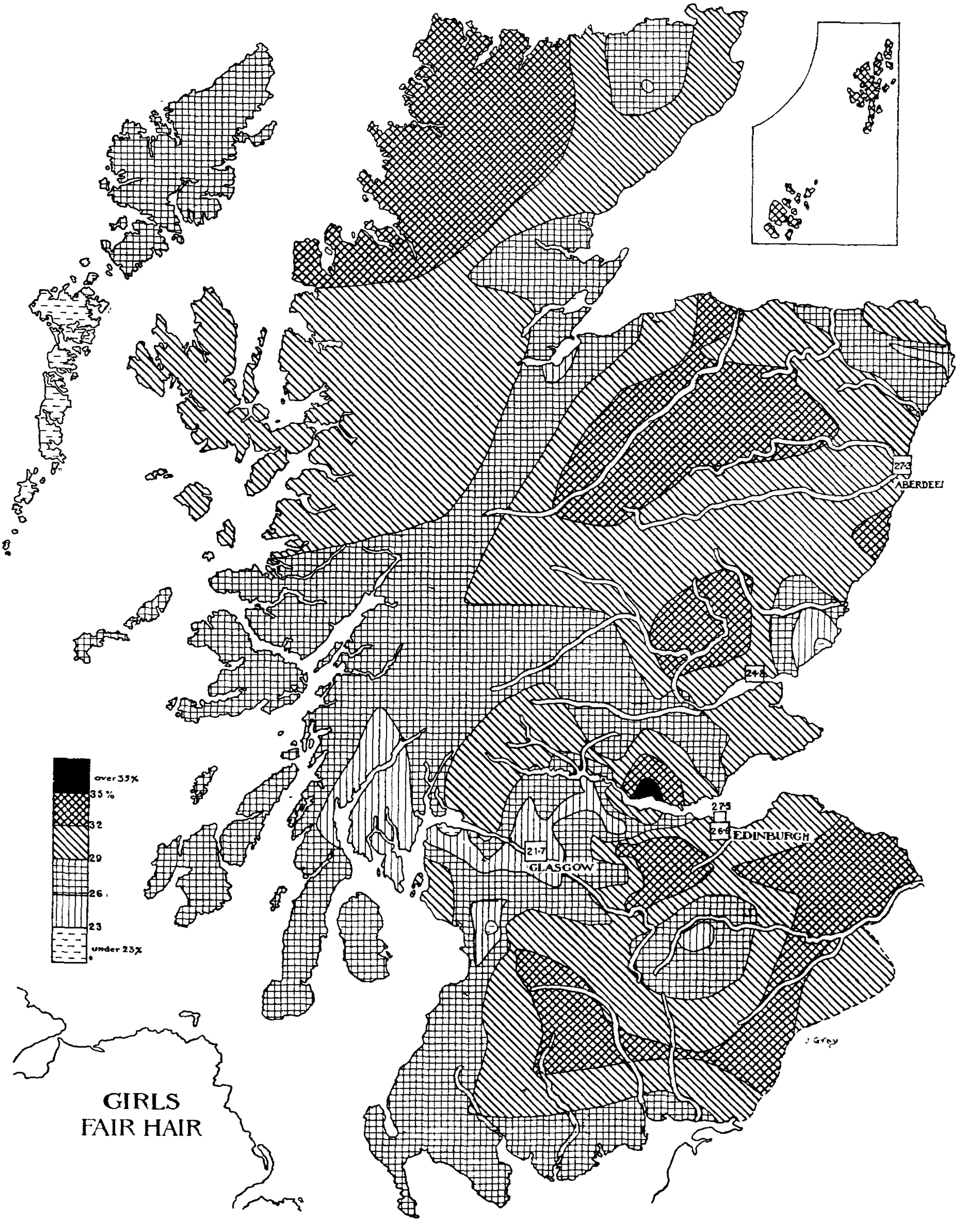

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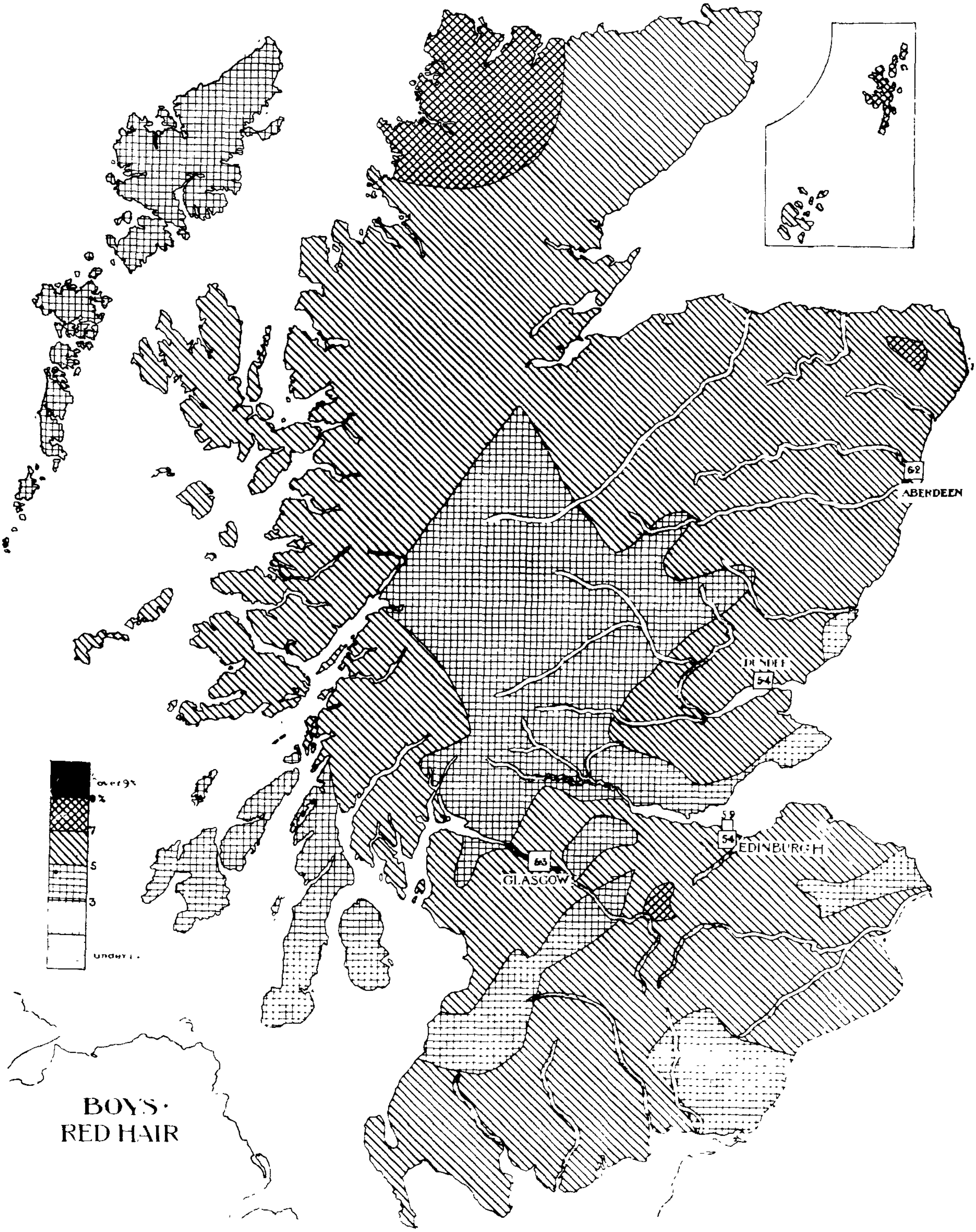

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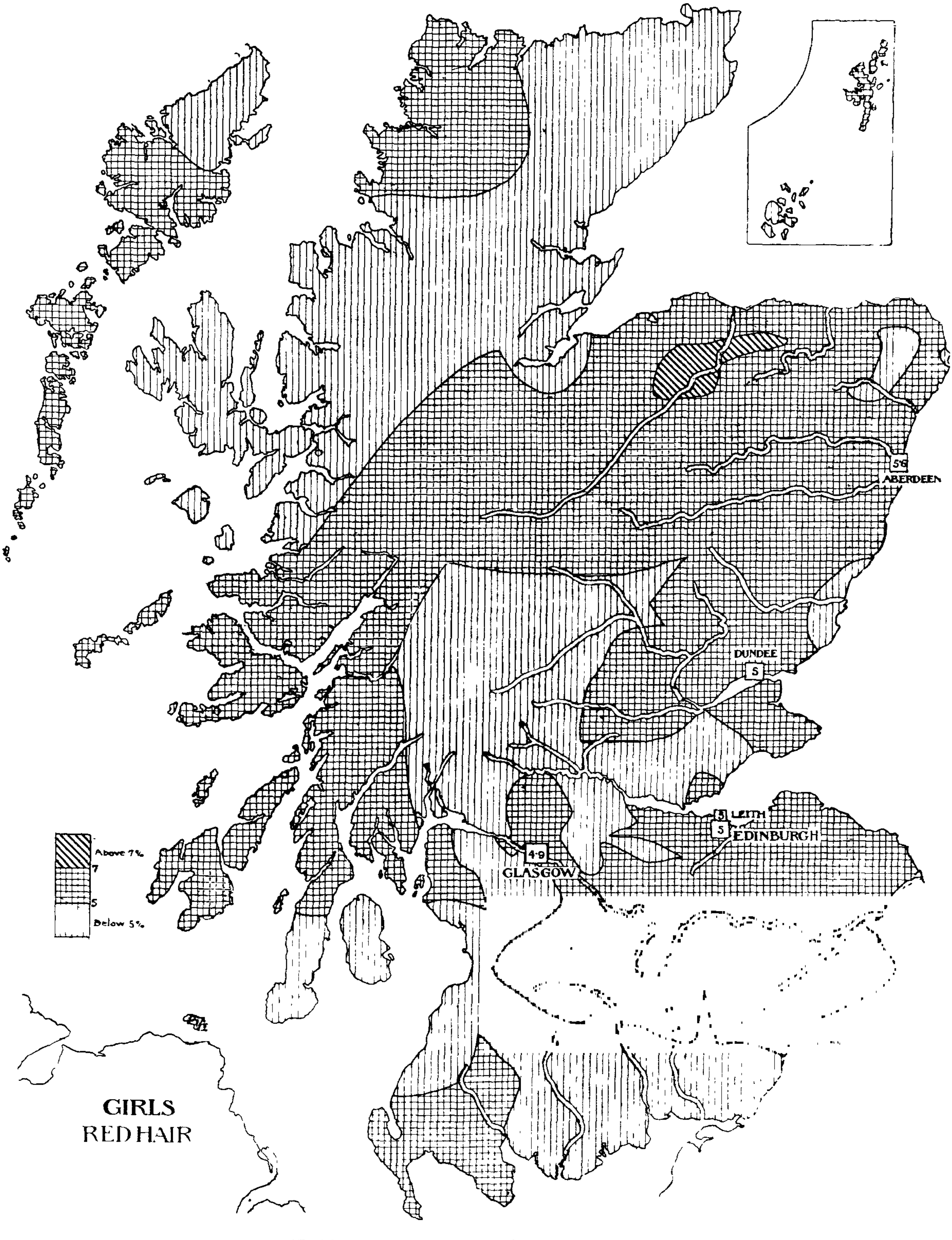
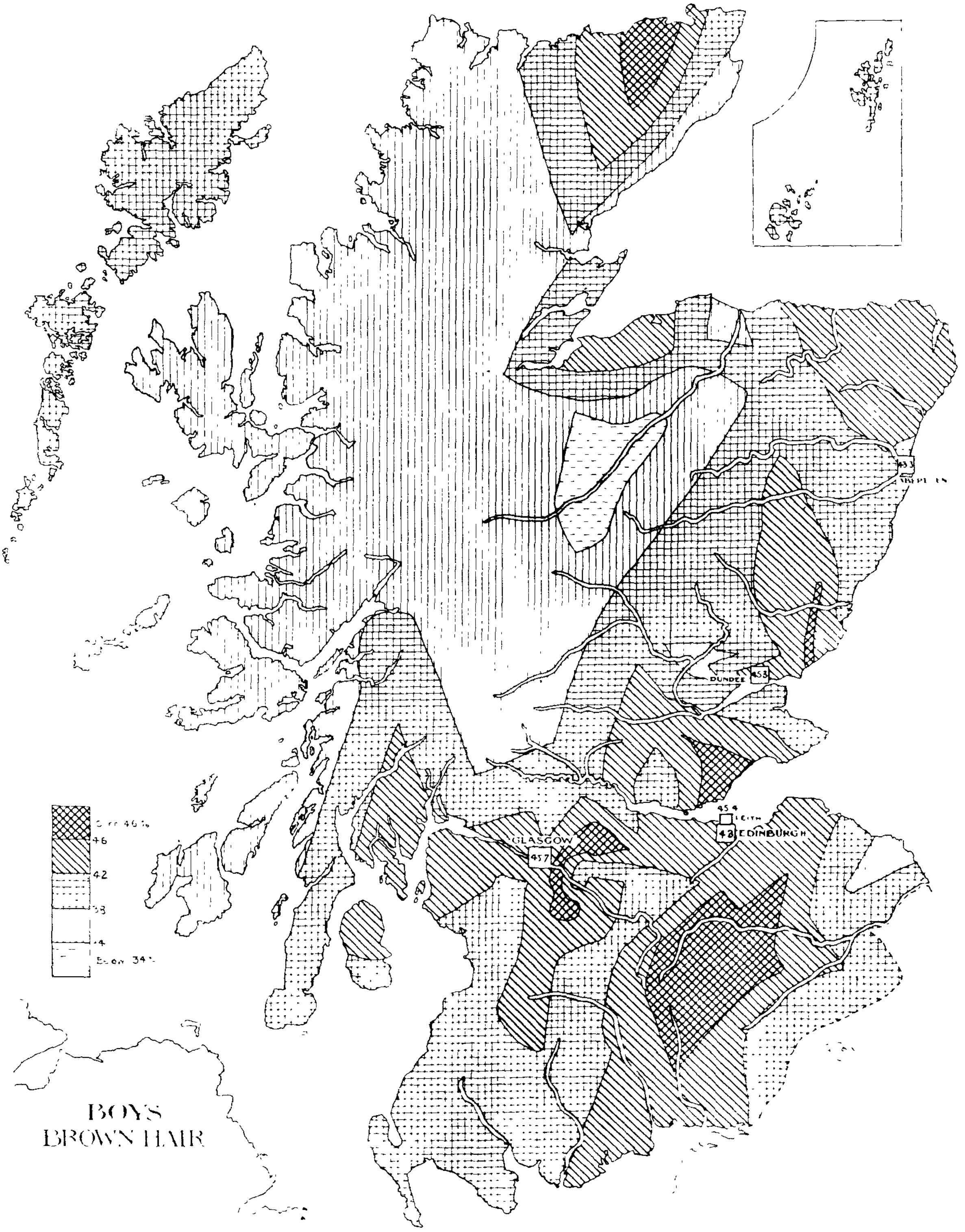


THE PIGMENTATION SURVEY OF SCOTLAND.

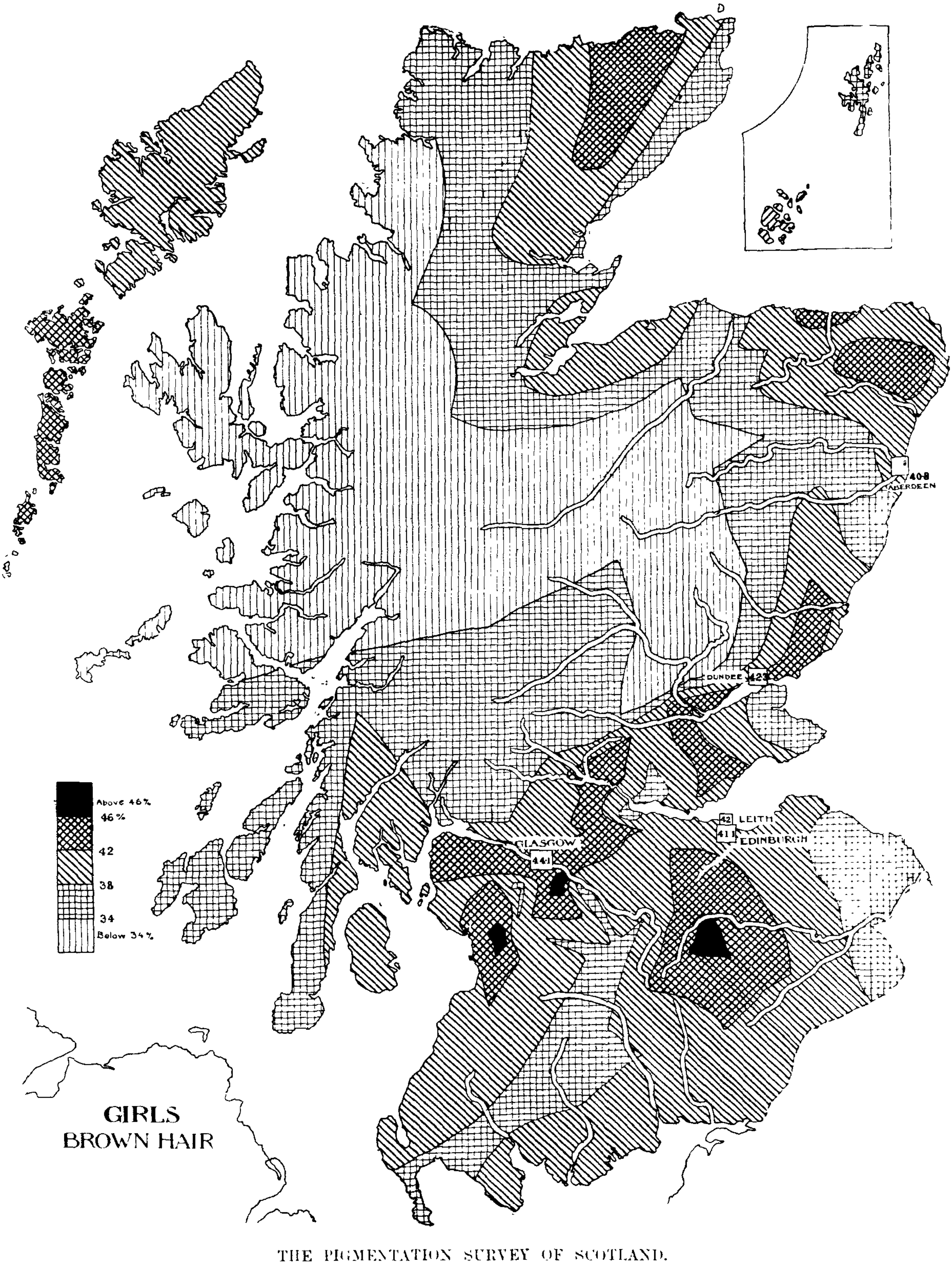
Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, Plate XXXII.



BOYS
BROWN HAIR

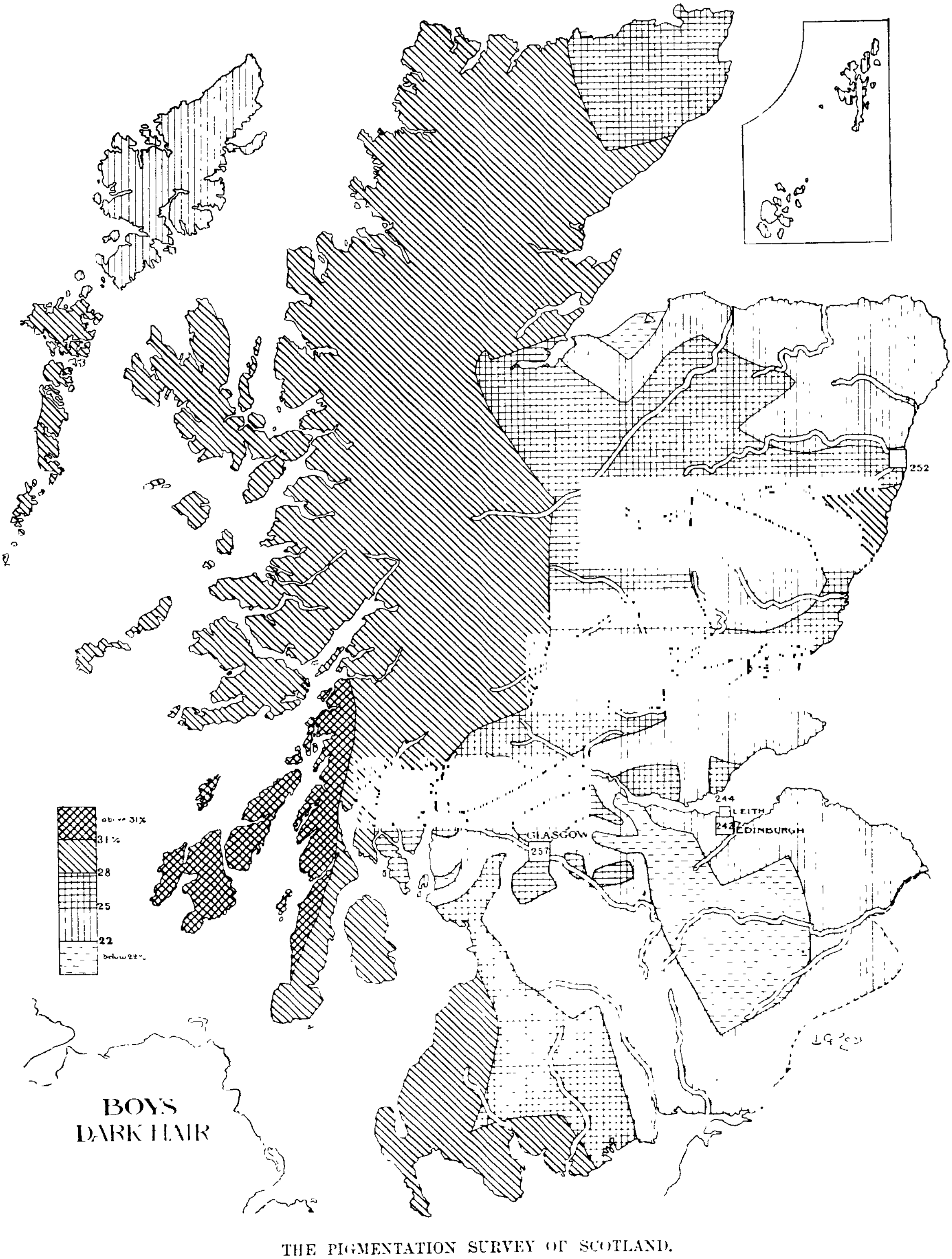
THE PIGMENTATION SURVEY OF SCOTLAND.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate XXXIII.*



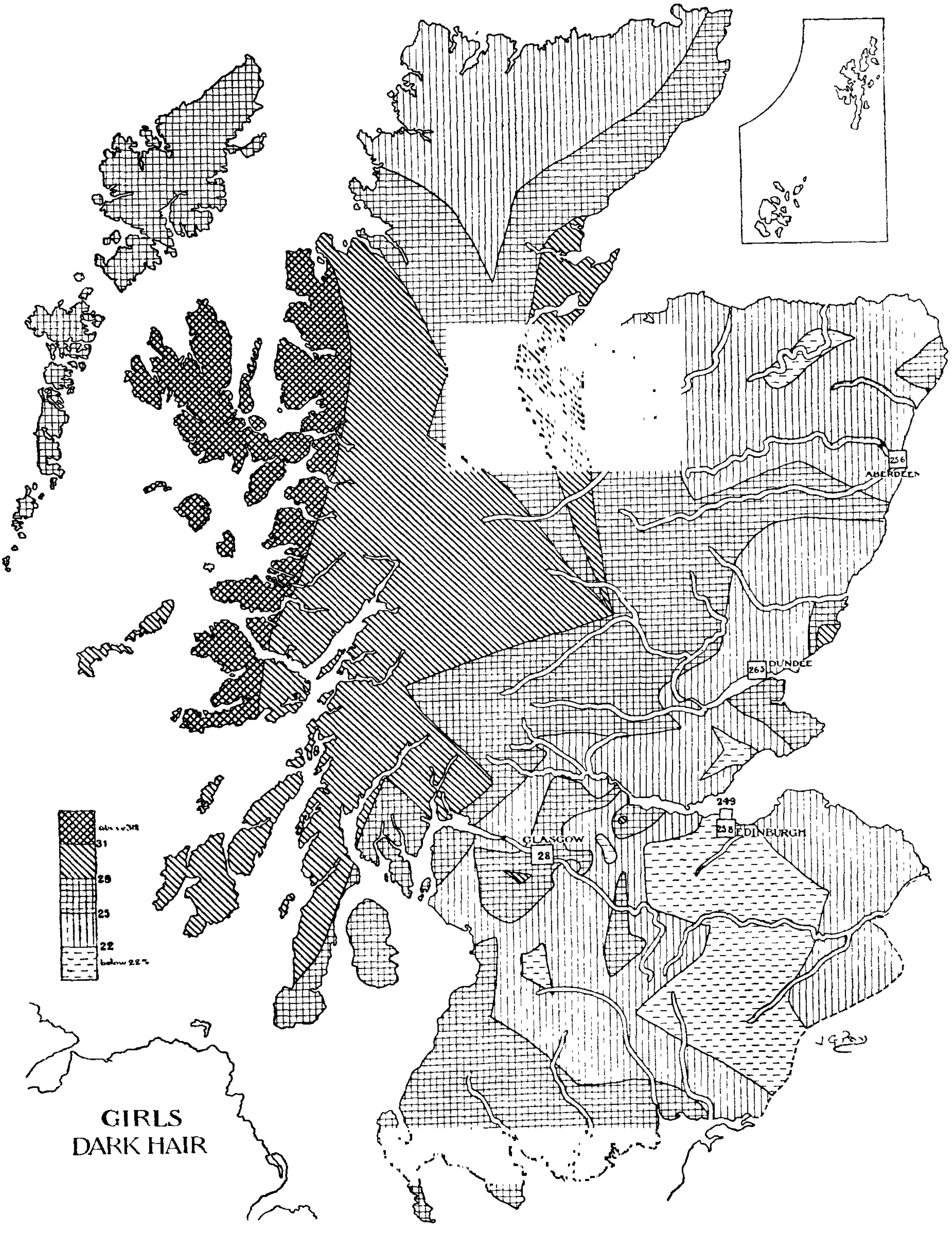
THE PIGMENTATION SURVEY OF SCOTLAND.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, Plate XXXIV.



THE PIGMENTATION SURVEY OF SCOTLAND.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate XXXV.*



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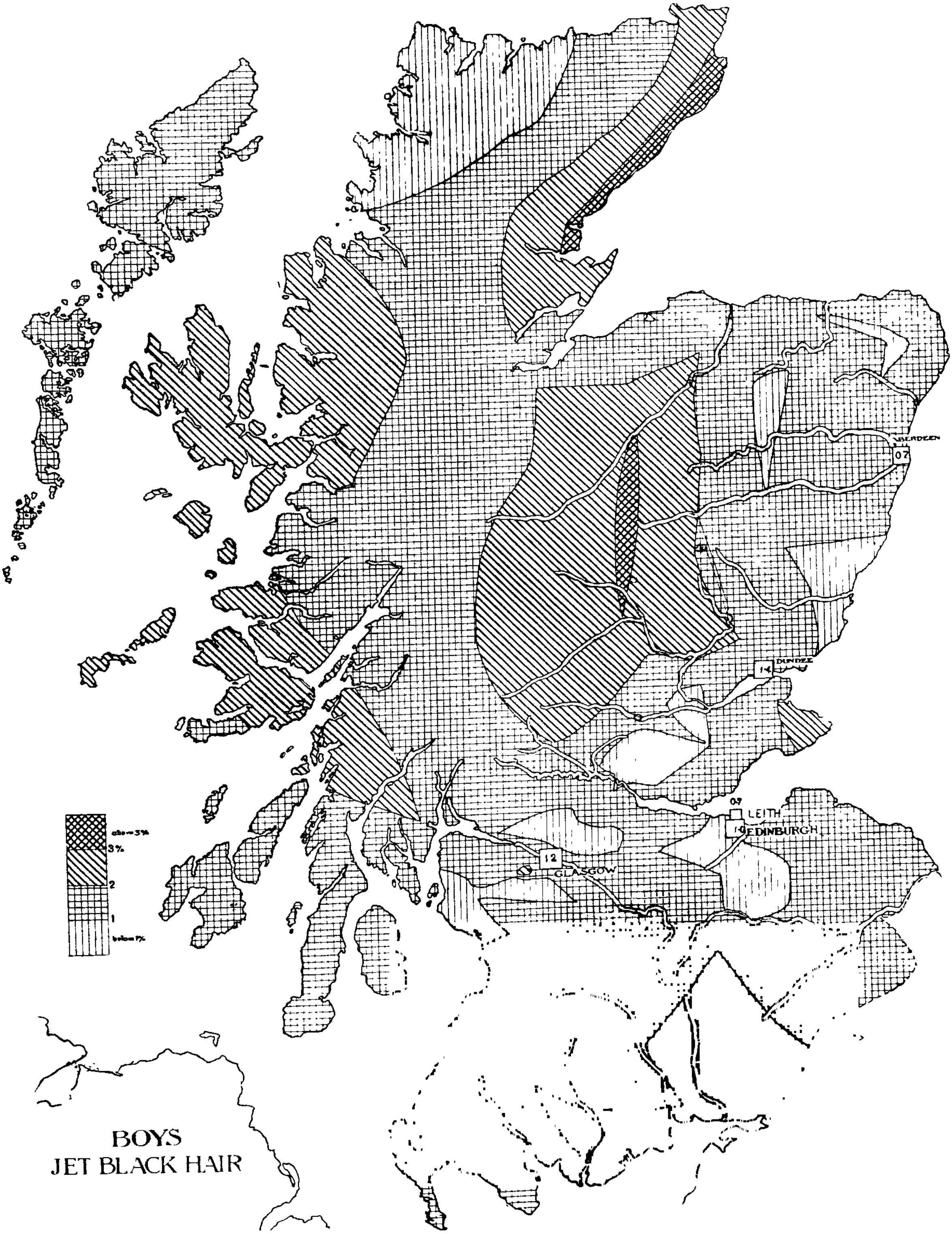
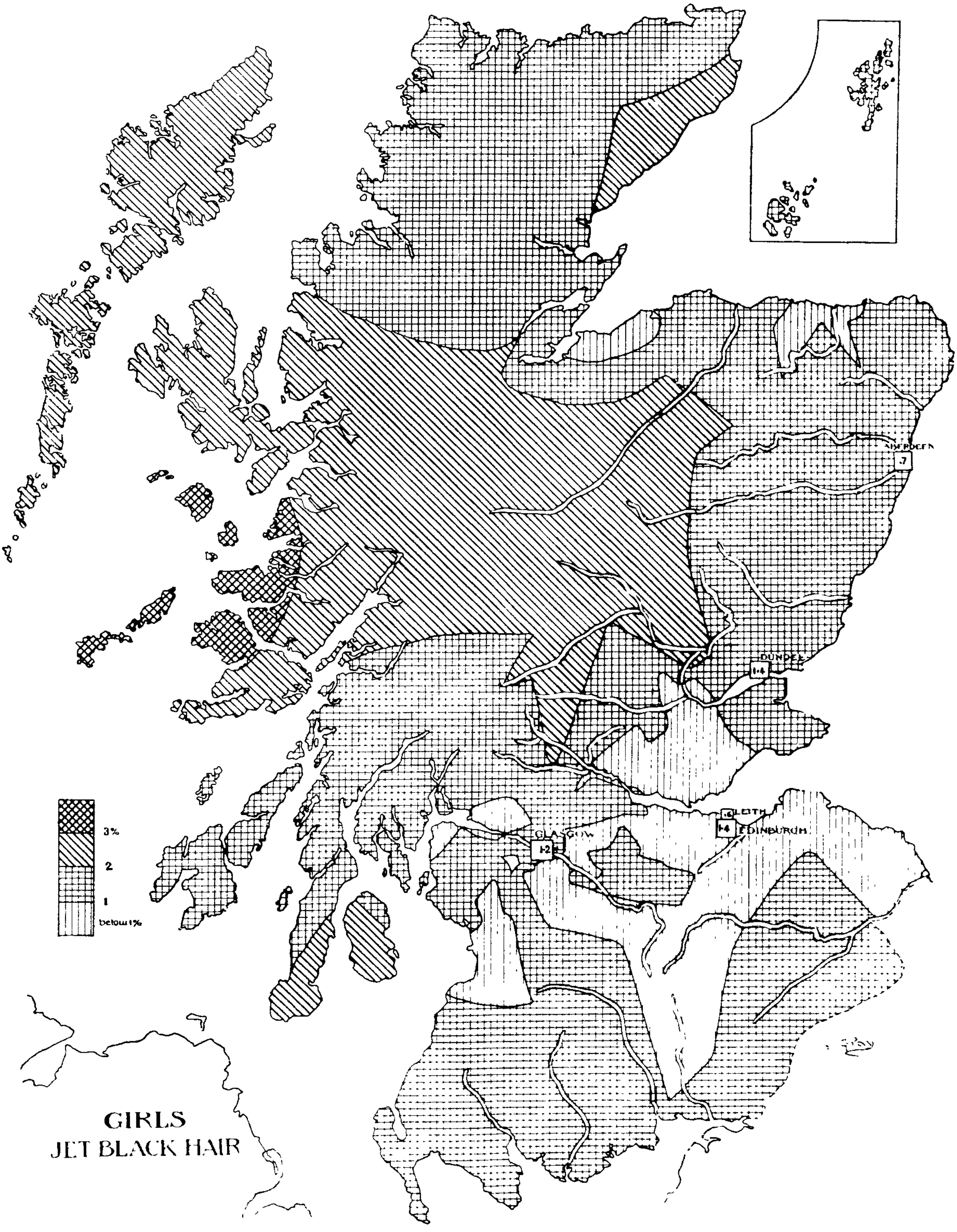


THE PIGMENTATION SURVEY OF SCOTLAND.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate XXXVII.*



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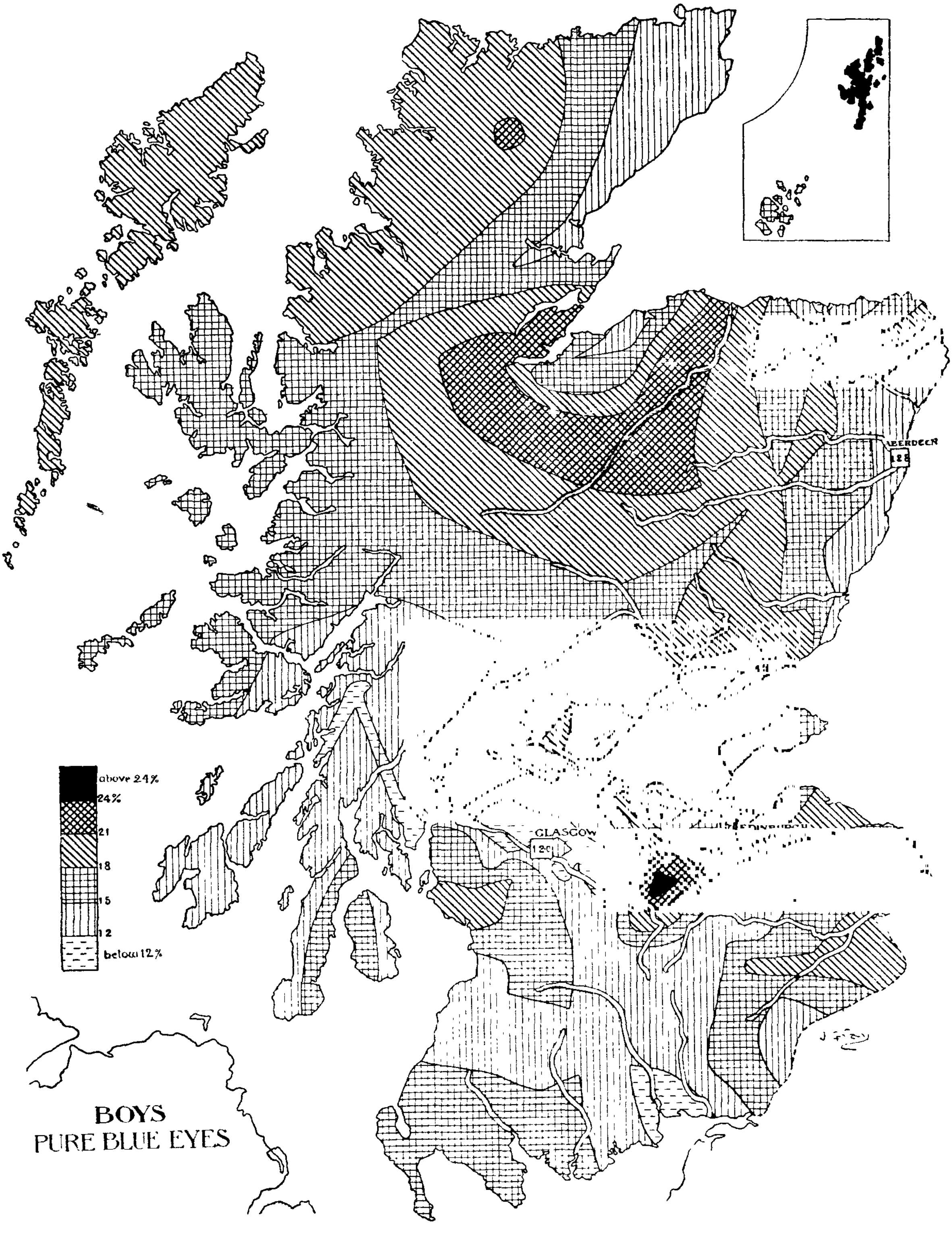

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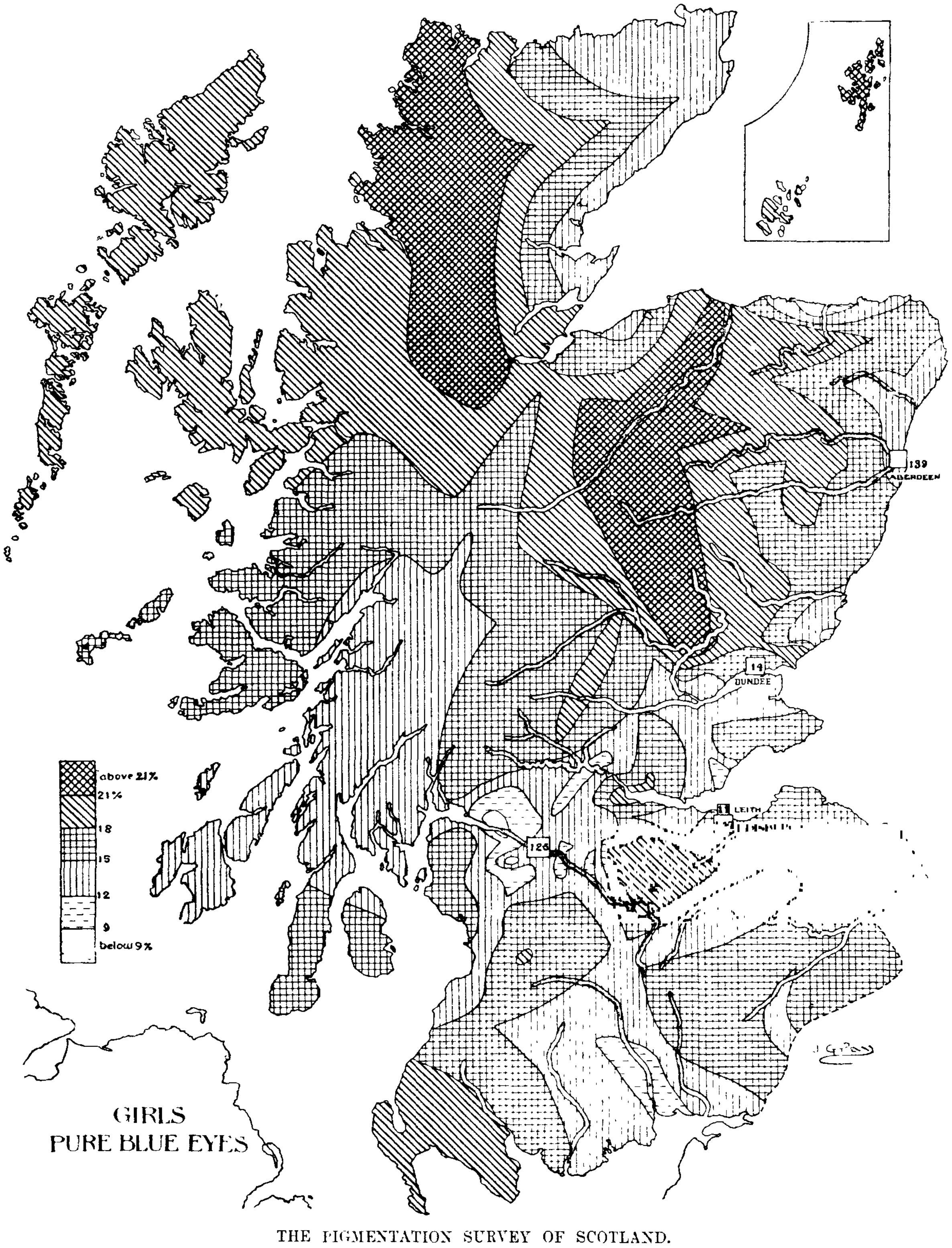

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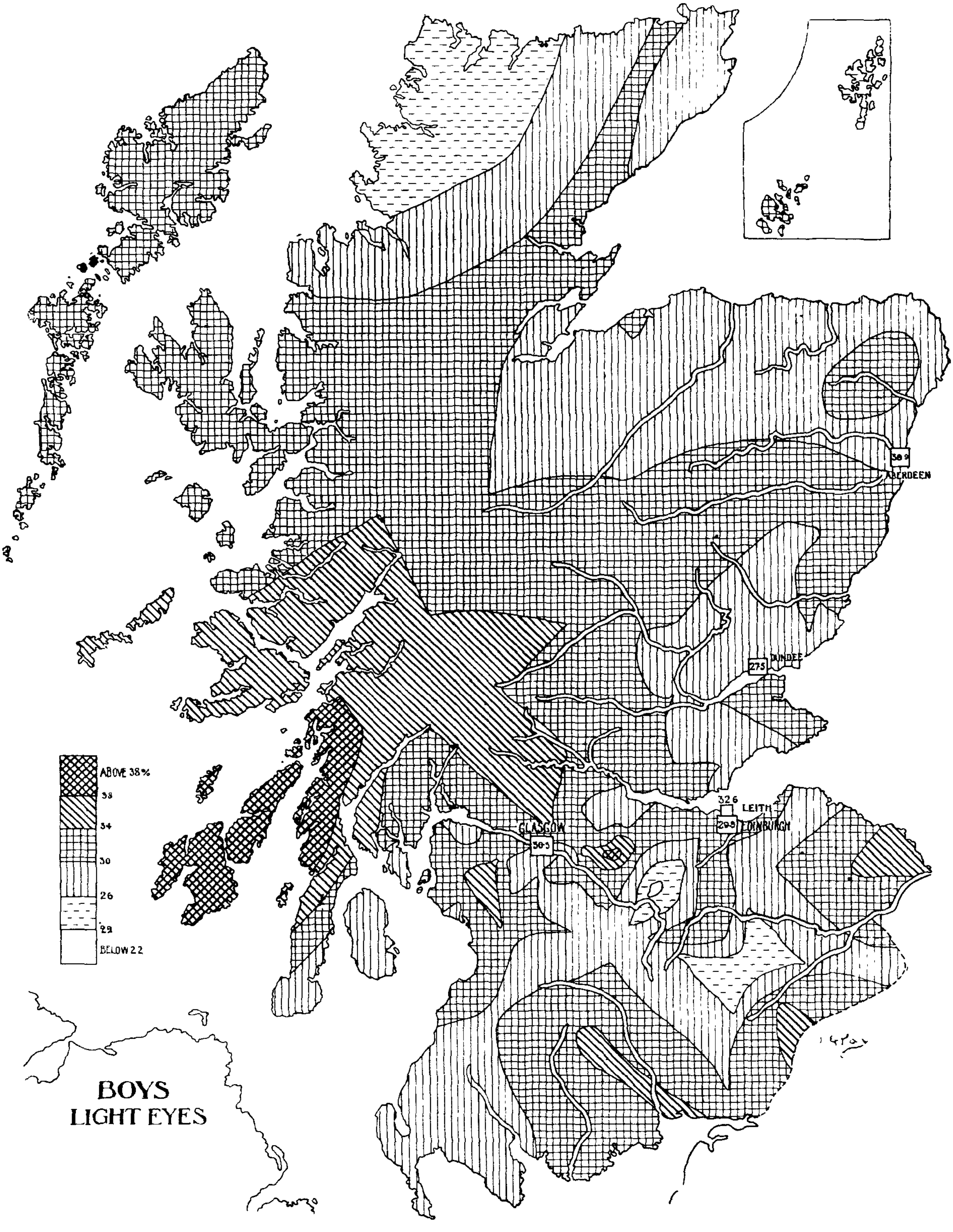

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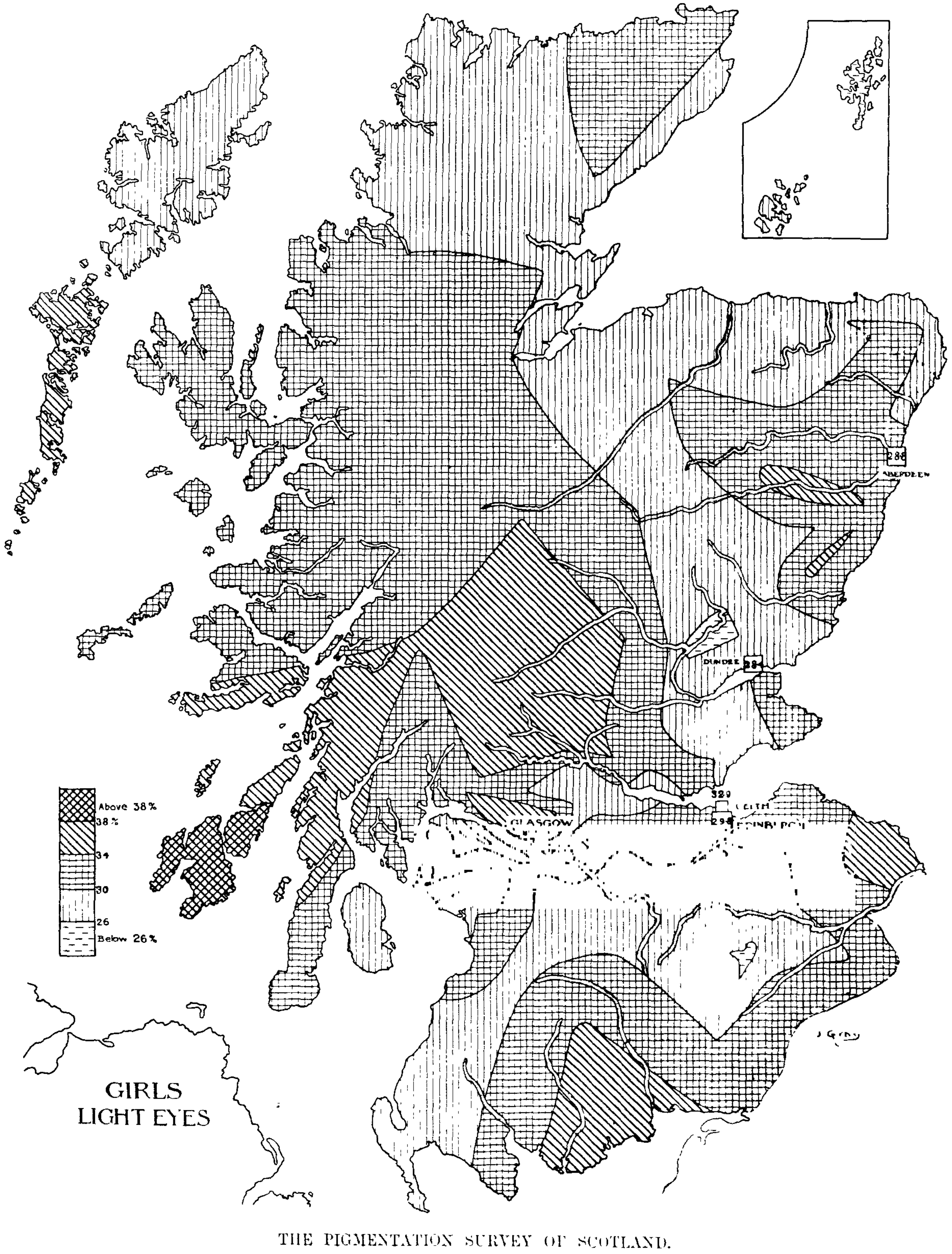
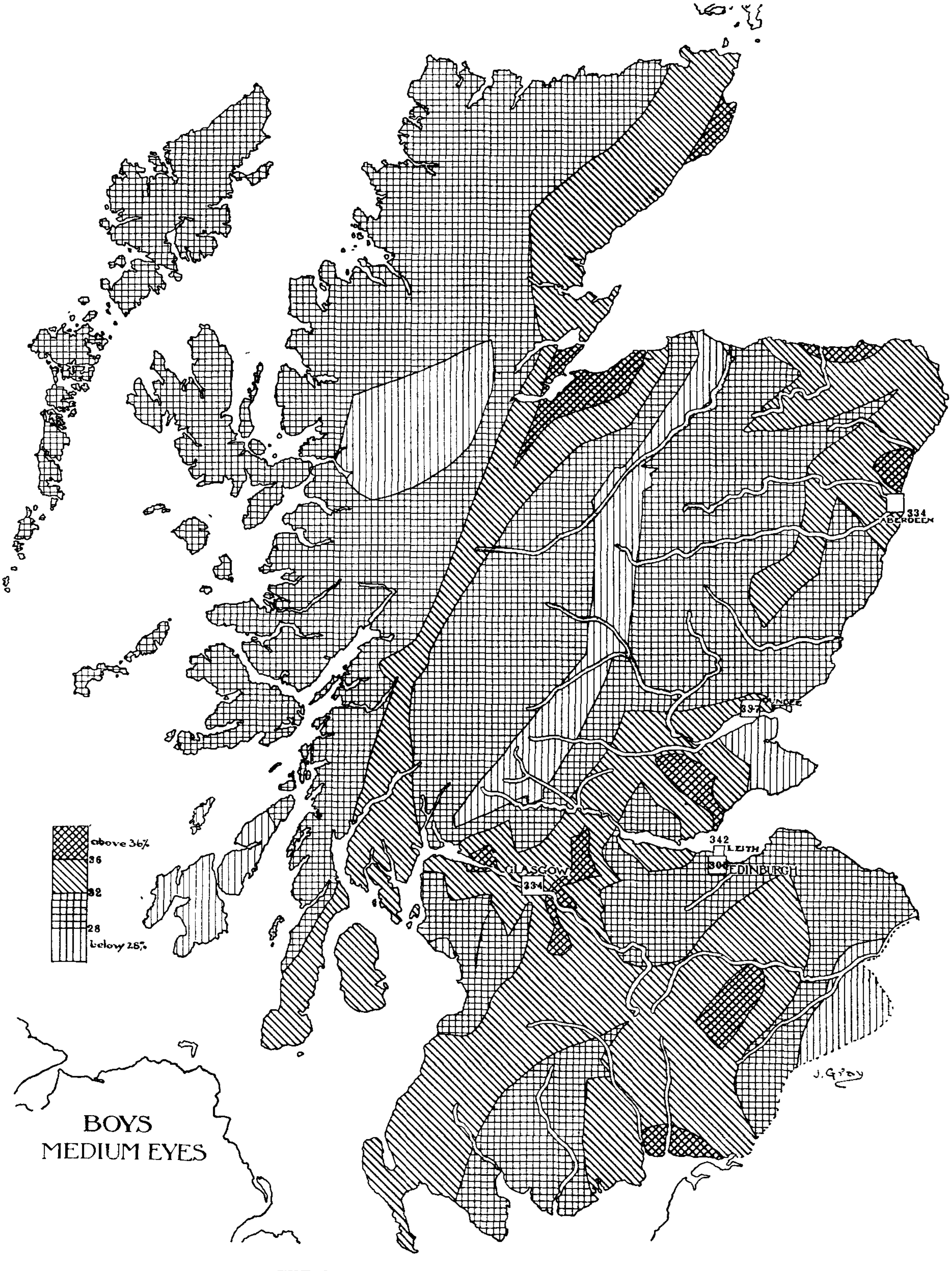


THE PIGMENTATION SURVEY OF SCOTLAND.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate XLII.*



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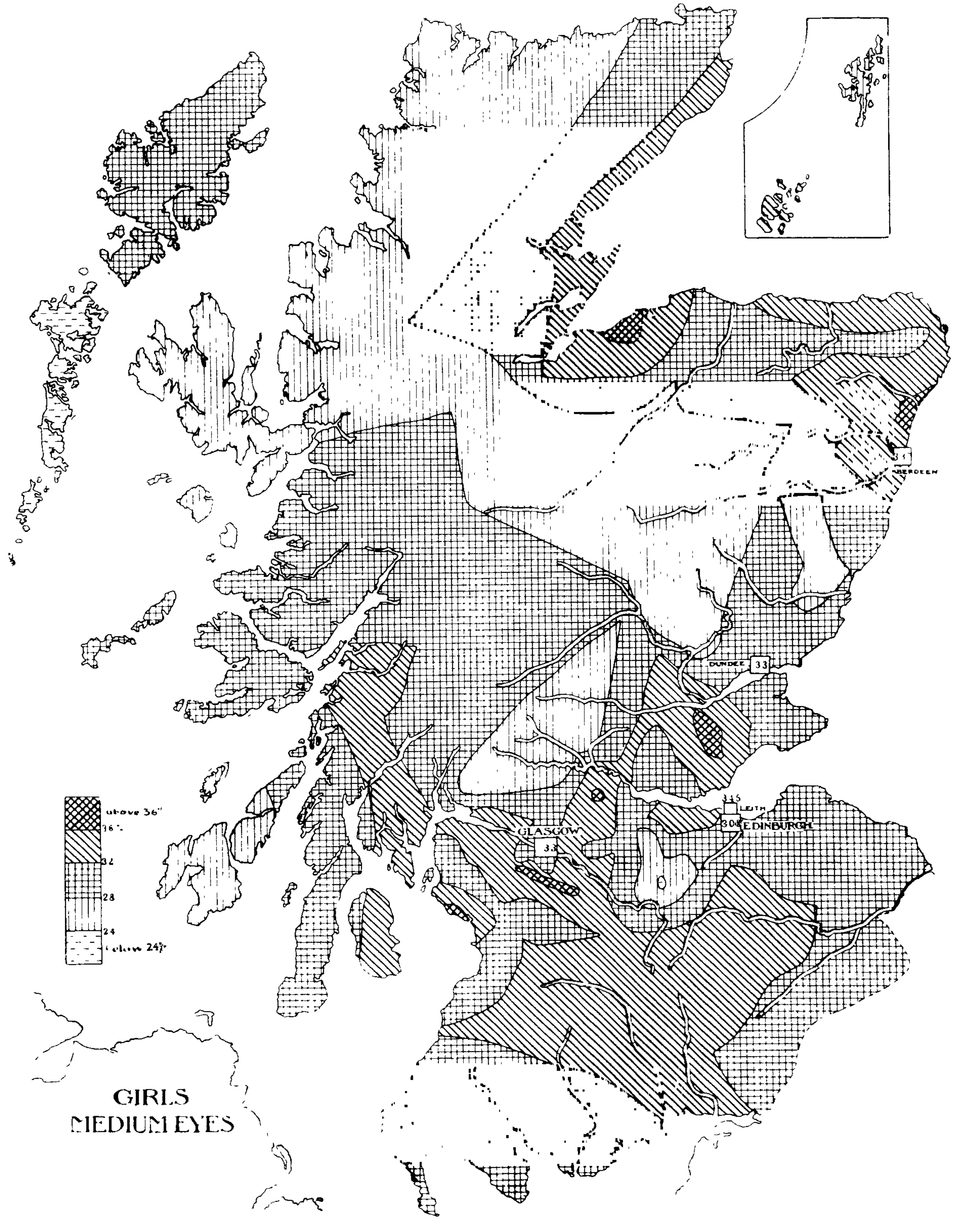
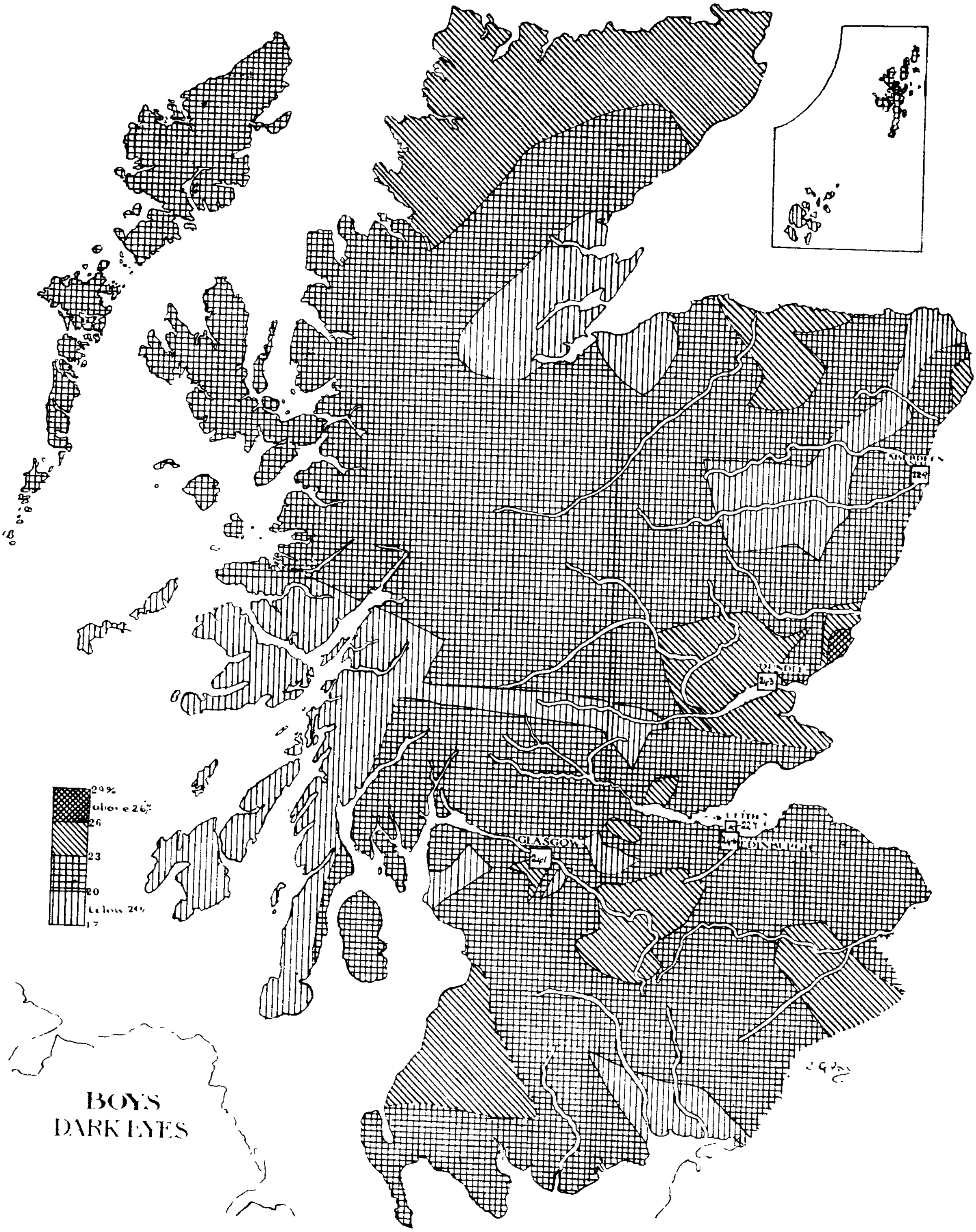


THE PIGMENTATION SURVEY OF SCOTLAND.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate XLIV.*



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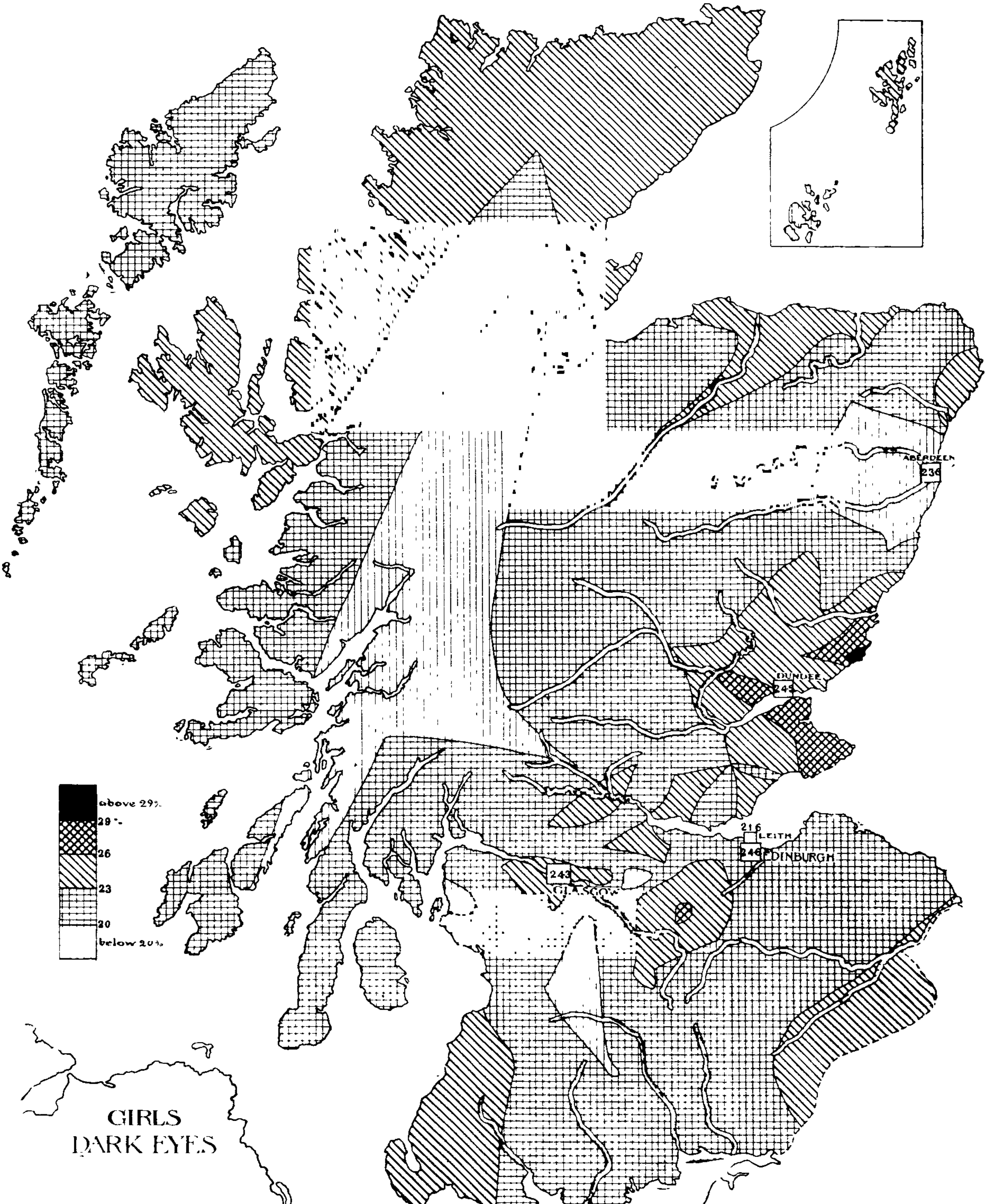
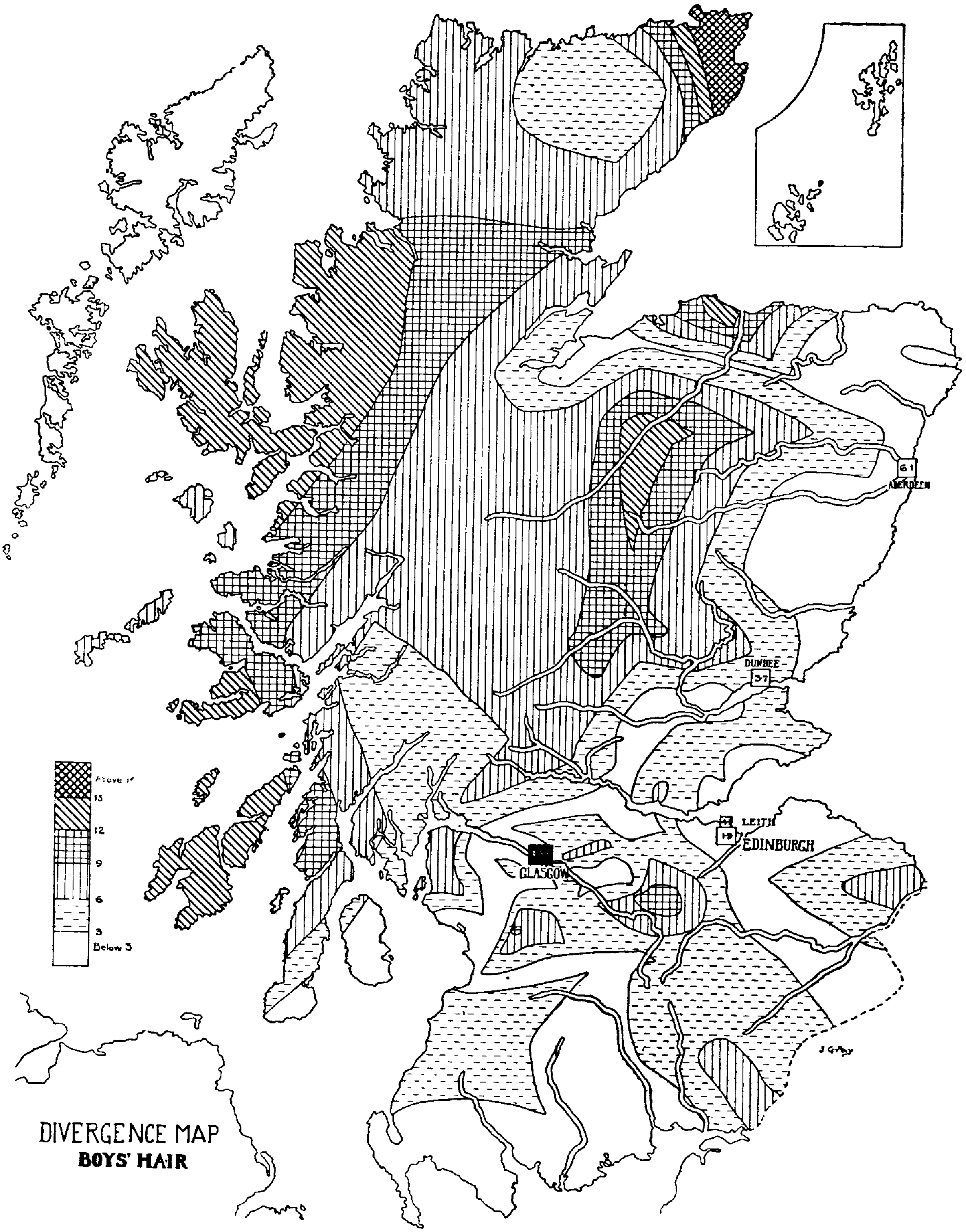


THE PIGMENTATION SURVEY OF SCOTLAND.

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate XLVI.*



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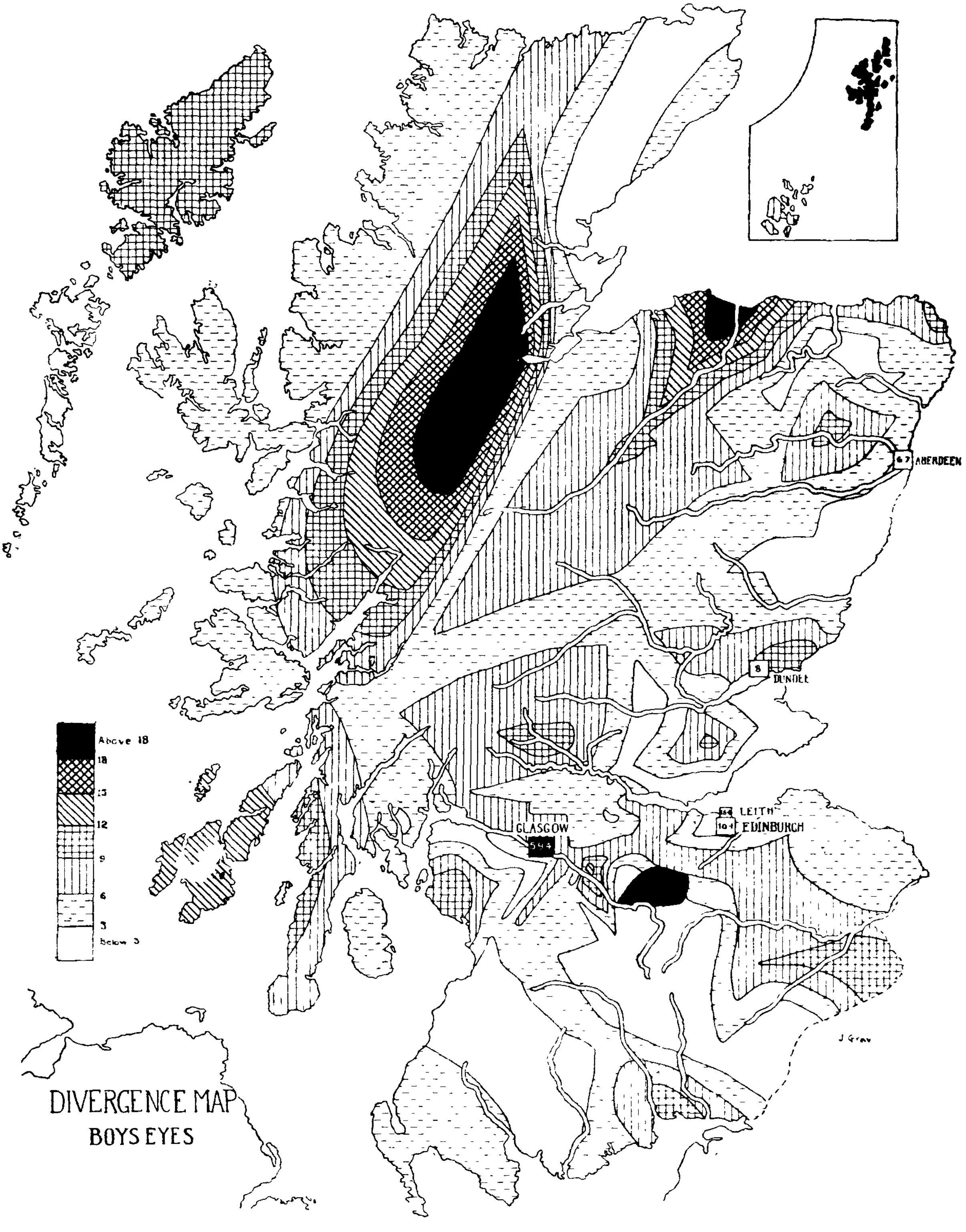

THE PIGMENTATION SURVEY OF SCOTLAND.

TABLE VI.

The percentage pigmentation in the five largest towns.

Boys.

		Hair.					Eyes.			
		Fair.	Red.	Med.	Dark.	Black.	Pure Blue.	Light.	Med.	Dark.
Glasgow ...	13	22·1	5·3	45·7	25·7	1·2	12·0	30·5	33·4	24·1
Edinburgh ...	44	26·3	5·4	43·0	24·3	1·0	15·1	29·8	30·5	24·6
Leith	45	23·6	5·9	45·4	24·4	0·7	10·5	32·6	34·2	22·7
Dundee ...	66	23·3	5·4	45·3	24·6	1·4	14·5	27·5	33·7	24·3
Aberdeen ...	77	24·5	6·2	43·3	25·2	0·7	12·8	30·9	33·4	22·9

Girls.

		Hair.					Eyes.			
		Fair.	Red.	Med.	Dark.	Black.	Pure Blue.	Light.	Med.	Dark.
Glasgow ...	13	21·7	4·9	44·1	28·0	1·2	12·5	30·1	33·0	24·3
Edinburgh ...	44	26·6	5·0	41·1	25·9	1·4	14·7	29·8	30·8	24·6
Leith... ...	45	27·5	5·0	42·0	24·9	0·6	11·0	32·9	34·5	21·6
Dundee ...	66	24·8	5·0	42·3	26·5	1·4	14·0	28·4	33·0	24·5
Aberdeen ...	77	27·3	5·6	40·8	25·6	0·7	13·9	28·8	33·7	23·6

Is it not possible that these idols with "canopies" may be ceremonial tables? That in the form of a bird is a convenient height for the purpose, while that with a human head seems originally to have terminated in a post. Those figured by Fewkes (Plate XC, *c* and Plate XCI, *a* and *b*) are also of suitable size, while the attitude of the human figure shown in Plate XCI, *b*, suggests that it is supporting something.

It is even possible that the eye of faith might see in the idol combining the figures of the bird and tortoise the personification of "the two nature powers representing the sky father and the earth mother," the worship of which "was the highest form of their [the Antillean's] cultus."[1]

There is only one wooden seat in the British Museum (Plate LII, 3), but that, an old and interesting specimen, is accompanied by fairly complete information. This specimen also belonged to the Christy Collection, having been presented in 1876 by Captain Melfort Campbell. An old label pasted in the middle of the seat, and dating to a period anterior, reads "Found in a cave at St. Domingo; presented by General S. Imbert, Dominican Army." The donor supplied the information that the specimen, which was given to him by General Imbert, was "found at Isabella, thirty miles from Porto Plata, St. Domingo, in a cave inhabited by Indians in former time."

Plate XLVIII and Plate XLIX, Fig. 3.

Cut from solid, very heavy and hard, dark wood. Ithyphallic figure of a man standing with legs stretched far apart, knees stiff, elbows close to sides and bent, hands flat over hips, fingers (four in number) close together, thumbs not indicated. A band in relief following the outline of the head represents the hair; the orbits (45 and 47 mm. wide) are cut intaglio, and a shallow groove (14 mm. wide at the centre) runs from the lower margin of each orbit down the cheek; within the orbits the lids are in each case represented by a hollow oval in low relief; these ovals and also the cheek grooves were probably inlaid with shell, since they contain traces of a layer of resin; the nose is in relief, the nostrils indicated by two shallow circular pits; the mouth is represented by a hollow oval in relief (width, 46 mm.), inlaid with shell plate (width, 35 mm.), engraved to represent teeth; the ears, in relief, are represented as carrying discs in the lobes, and ears and discs seem to have been furnished with inlay, since they are provided with cavities still containing resin; a transverse groove appears on each arm immediately below the shoulder, and the traces of resin here also indicate that inlay, in this case representing armlets, was originally present. On the legs are represented the characteristic cotton bandages at knee and ankle; the feet are represented by irregular discs, on the front of which the toes are indicated by engraved vertical lines. At the back the shoulder-blades and spine are represented in sharp relief, the latter being divided into vertebræ by ten transverse grooves at irregular intervals. Total height of figure 405 mm.

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[1] *Fewkes*, p. 34.

(British Museum; figured in *Archaeologia*, vol. xiv, Plate XLVI.)

Plate XLIX, Figs. 1 *and* 2.

Cut from solid, very heavy and hard, dark wood. Human figure to the hips; the hair is represented by a narrow engraved band in relief along the top of the head; the forehead, brows and nose are in relief; the nostrils appearing as two shallow circular pits; the orbits are oval and cut *intaglio* (36 × 11 mm.), and were probably inlaid, since one still contains a layer of resin: from the lower margin of each a groove (about 18 mm. broad) runs down the cheek, as in the specimen first described, but in neither case is it cut as deep as the eye-cavity; the mouth is a hollow oval in relief, the cavity containing a layer of resin; the ears are shown in lateral relief, and are represented as furnished with discoid ear-plugs in the lobes, the centre of each ear-plug being marked by a circular cavity containing traces of resin; the trunk is relatively small; the arms, in relief, are pressed against the sides, elbows bent at right angles, and the hands approaching one another palms inwards, the wrist and fingers indicated by engraved lines; between the hands is a projection of uncertain meaning, and damaged; an engraved circle with a dot in the centre represents the navel: on the horizontal surface between hands and trunk are two engraved circles; below the hands a groove encircles the figure, which is circular in section and seems to have terminated in a post; from between the shoulders at the back springs a perpendicular rod, expanding forward at the top to form an oval discoid canopy, pierced with a vertical hole; the rod is cut from the solid, but there seems to be an indication that it fits into a socket projecting from between the shoulder-blades of the figure. Total height, 375 mm.

(British Museum; figured in *Archaeologia*, vol. xiv, Plate XLVI.)

Plate L and Plate LI, Fig. 1.

Cut from solid, very heavy and hard, dark wood. Bird-headed figure, the beak bent downwards and the tip touching the breast: on the head is a flat head-dress with engraved ornament; two knobs on either side of the temples may represent ears: the eyes are oval cavities (48 × 33 mm.) and were probably inlaid, as a thick resinous matrix remains. Towards the end of the beak on the right-hand side a long narrow shell plate (68 × 9 mm.) engraved to represent teeth has been inlaid, and there is a corresponding slot (73 × 10 mm.) on the other side from which, evidently, a similar plate has fallen; the figure is furnished with arms; the left (length, 260 mm.) is stretched out laterally at right angles, the right (length, 265 mm.), also outstretched laterally, is inclined downwards: four fingers are indicated on each hand. The body tapers to a single stem, probably representing conjoined legs; at what may be considered the juncture of legs and body is a rough indication in relief of male organs, there is a swelling in the region of the knees and there appears to be an indication of two small feet; the latter, however, may be accidental and due to the shape of the original material. Total height, 888 mm.

(British Museum; figured in *Archaeologia*, vol. xiv, Plate XLVI.)

Plate LI, Fig. 2.

Cut from solid, heavy, hard, brown wood, showing signs of weathering. Figure of a bird standing on the back of a tortoise or turtle (diameter, 300 × 265 mm.), of which the head is bent up at right angles so that the mouth is in contact with the bird's beak. The bird—which resembles some kind of stork—has a topknot, ornamented on both sides and the top with engraved patterns. The eyes are represented by oval depressions (length, 50 mm.), probably inlaid originally, since one of them contains traces of resin. The wings, represented as folded close to the sides, are ornamented with circular and scroll patterns in bas-relief; the legs are conjoined and show four claws on each foot; the eyes of the tortoise or turtle are represented by circular depressions (diameter, 19 mm.), and there are traces of engraved ornament on head and carapace. From between the wings of the bird springs a vertical post (length, 190 mm.), circular in section, supporting a discoid canopy considerably broken. Total height of figure, 665 mm.

(British Museum; Christy Collection, M.I., 168.)

Plate LII, Figs. 4 *and* 5.

Cut from solid, heavy, hard, brown wood; much weathered. Head and "shoulders" of a sea-bird (?); from the top of the head rise two short horn-like projections, one on each side: the beak is characteristically gull-like: the eyes are represented by two solid circles in relief, set in circular depressions; the figure is cut off at the "shoulders," just below the commencement of the wings, which are rudely indicated in lateral relief as folded close to the body. Total height of figure, 370 mm.

(British Museum; Christy Collection, 2159.)

Plate LII, Fig. 3.

Cut from solid, heavy, hard, brown wood. Ithyphallic figure of a man lying prone on knees and elbows: the forehead is much flattened, and represents artificial deformation: the eyes are deep circular cavities (diameter, 18 mm.) and look as if they had held inlay; the mouth is open and the lower jaw very prominent; the ears are in lateral relief and are represented with circular discs in the lobes: a line in sharp relief runs from the point of the nose over and behind the ears: the chin rests on the fists, which are clenched with the nails downwards, ribs and navel are shown in relief and also the male organs; the back is hollowed out to form a seat; the legs are parted, and the right bent sharply at the knee so that the foot is elevated in the air; below each knee is a transverse groove encircling the leg, representing a knee-bandage, that on the left broader than that on the right; these grooves were, evidently, not inlaid, since they are filled with engraved ornament; the ankle-joints are shown in relief, the feet are short and broad, and the toes bent over. Total length, 730 mm.

(British Museum; Christy Collection, 9753.)

THREE-POINTED STONES.

The British Museum possesses three of these peculiar objects (Plate LII, 1 and 2, and LIII, 6, 7 and 9). All of them belong to the first type of Fewkes' classification, the other types being unrepresented in the national collection. Of this type, that first described (Plate LII, 1, and LIII, 6) belongs to Fewkes' first group, the human-headed; the second (Plate LII, 2, and LIII, 7) seems to me to bear the head of a beast, a design for which Fewkes has made no group; the third (Plate LIII, 9) may be classed with Fewkes' reptilian group.

The first has been in the collection for many years, but, unhappily, there exists no information as to when or how it was obtained; the head resembles that figured on p. 112 of Fewkes' article, but the general outline is more similar to that on Plate XXXIII, Fig. c.

The second was purchased at a sale in London in 1904, together with the collar shown on Plate LIII, 2, the pestle figured on Plate LIV, 7, and the two "ornaments," Plate LV, 8 and 9.

The third is somewhat different from the other two, so much so that I never remember to have heard of a similar specimen; it is smaller than the rest, the rock from which it is cut is not so heavy and much coarser, the workmanship is far rougher, and the projection is distinctly pyramidal. But the chief interest of the specimen lies in the locality in which it was found. Fewkes (p. 111) writes: "The geographical distribution of the three-pointed stones is confined to a single region of the West Indies, namely, Porto Rico and the adjacent eastern end of Santo Domingo. They have not been reported from Cuba, Jamaica, the Bahamas, or the Lesser Antilles." This specimen, which was given to the Christy Collection in 1872 by Mr. A. W. Franks (afterwards Sir A. Wollaston Franks, K.C.B.), comes, according to contemporary information, from St. Vincent.

As to the original purpose of this class of object I must confess myself at a loss for a suggestion; they exhibit certain contradictory features which it is not easy to reconcile; on examining them for traces of wear such as might convey a hint of their use, one is struck first by the concavity of the base, which seems to suggest that they may have been used as mortars or mealing-stones; it is noticeable that in the smallest specimen described, which is cut from stone softer than the other two, this concavity is more pronounced and seems to be due to longitudinal friction; if they were used in this way the projection was probably fixed in the ground, a theory which would account for the "bruising" which is often to be seen on the point. On the other hand, many of them seem to be furnished with grooves round the "head" and "tail" ends which might have served for lashings to fasten them to a handle of some sort. But a stronger argument against the mortar theory is the fact that if put to such a use the carved ornament would not only be upside-down, but entirely invisible, and as far as one can see, meaningless; indeed, it seems to contradict the canons of primitive art. If the friction on the bases had anything to do with the use, it seems more likely that they were used as rubbers to polish large stone objects of rounded shape, as, for instance, the collars; the weight would prove of great assistance in such work, and the projection would furnish a useful grip for the two hands, which could be transferred to the "head" and "tail" ends if it was desired to give a different motion, such, for instance, as a "rocking" movement, to the rubber.

Plate LII, Fig. 1, *and Plate LIII, Fig.* 6.

Three-pointed stone; cut from solid, dark, volcanic rock; length, 300 mm.; height, 123 mm.; belonging to the first group of the first type of Fewkes' classification (p. 111). One end is carved to represent a human head, with nose in sharp relief; eyes and mouth represented by hollows; ears in lateral relief, with indication of discoid ear-plugs in the lobes: a band in relief across the forehead may represent hair; the other end represents buttocks, legs and feet; the knees are bent, the feet close together; four toes are indicated on each; the projection is conical and pointed, the anterior and posterior sides of the cone being slightly concave; the under surface is slightly hollowed.

Plate LII, Fig. 2, *and Plate LIII, Fig.* 7.

Three-pointed stone; cut from solid, dark, greenish rock; length, 259 mm.; height, 119 mm.; belonging to the first type of Fewkes' classification, but corresponding to none of his groups, in that one end is carved to represent the head of a beast (not a reptile) with rounded ears in high relief; the eyes are not indicated, but across the face in this region runs a transverse band in low relief; a similar band runs behind the ears and over the neck; the snout is blunt and the mouth indicated by grooves; the other end represents buttocks, legs with knees bent, and feet, the last pressed closely against the end of a broad tail passing between them; the portion of the tail above the feet is carved in bold relief; the projection is a broad-based cone with blunt point, "swollen" at the sides; the under-surface is noticeably hollowed.

(British Museum; 1904, 10–19, 2.)

Plate LIII, Fig. 9.

Three-pointed stone, cut from solid, brown, coarse volcanic rock; one end is broken; present length, 135 mm., estimated length when perfect about 190 mm.; height, 74 mm. It belongs to group 2 of Type 1, of Fewkes' classification; the perfect end is carved to represent a reptilian head; the eyes are represented by hollow circles in very low relief with pits in the centres; the projection is pyramidal, roughly square in transverse section; the base is markedly hollowed with evident signs of longitudinal friction.

(British Museum; Christy Collection, M.I., 240.)

STONE COLLARS.

Of the peculiar objects known as stone collars, the British Museum possesses four examples, one belonging to Professor Mason's first class, the massive (Fig. 2 text), three to his second class, the slender oblique oval (Plate LIII, 1 to 5); of these, two are "right-shouldered" and one "left-shouldered" (see Mason's classification, *Smithsonian Report*, 1876, p. 385, foll., quoted by Fewkes, p. 159, foll. For convenience, and to explain the terminology used, the accompanying illustration —Fig. 1 text—has been adapted from Fig. 25, appearing on p. 160 of Fewkes' treatise.)

Of the collars described below, the first (Plate LIII, 5) belongs to the Christy Collection; it is described as having been "found at St. Thomas'." Of the second (Plate LIII, 1 and 3) nothing is known save that it has long been in the British Museum Collection. The third (Plate LIII, 2 and 4) was purchased at a sale in London in 1904, together with the three-pointed stone described above and the pestle and ornaments described subsequently. The massive collar (Fig. 2 text) originally belonged to the collection of Mr. Josiah Cato and subsequently to that of the Rev. Sparrow Simpson, and was added to the Christy Collection in 1875.

To the discussion of the use of these remarkable and puzzling objects by Professors Mason and Fewkes, I have little to add. One point seems to me to have been insufficiently emphasised, and that is the following. It is perfectly obvious that these collars were constructed originally of wood; a young tree was selected and cut off immediately below a fork; the two ends of the fork were trimmed into unequal lengths, the longer bent round so as to overlap the shorter, and the two fastened together by a band of cotton similar to the leg-bandages worn by the natives. This is easy to see from the great majority of collars, and, indeed, Professor Mason speaks of the "shoulder ridge" as "faintly resembling a lashing of the two ends of a hoop;" though he goes no further.

But the specimen figured on Plate LIII, 1 and 3, proves it conclusively; here there is no "lashing," and its absence allows the overlapping and hooking of the two ends to be clearly indicated. If we retranslate from stone to wood we see that the juncture of the ends in this case (and perhaps in all) was effected as follows:—

When the limbs of the fork were trimmed, the stump of a small subsidiary branch, growing in a convenient position towards the end of each, was left projecting; the longer limb was bent round, and the projection towards its termination was hooked round the projection on the shorter limb; the addition of a cotton bandage would hide the joint and make all secure.

Whatever was the use of these enigmatical objects, I feel sure that they could not have been worn either as badges or ornaments. Fewkes has collected a large number of passages from early writers which shed a great deal of light upon the dress and ceremonies of the Antilleans, but in none of them is any mention made of stone collars, though other forms of decoration are described in detail. Had these collars been worn, even ceremonially only, it seems almost impossible that such remarkable objects could have escaped the notice of the early observers. The number that is known to exist (Fewkes (p. 159) speaks of "about one hundred" from Porto Rico) renders the *argumentum e silentio* still stronger. It seems to me that they are to be considered as one of the numerous types of *zemi*, a term of wide meaning, which appears to include objects of worship and charms, personal, family and communal. As such they would naturally be kept hidden in the houses of the natives or in caves, and would be more likely to escape the notice of the alien conquerors. I would, though with considerable hesitation, suggest the following as a possible explanation. Starting with the supposition that they were originally constructed of wood (which seems to me to be almost certain), it seems possible that a clue might be found in the prevalence of tree-worship in the Antilles. Fewkes (p. 56) relates that "the *zemi* Faraguavaol was the trunk of a tree found by an Indian and carried to a chief," and he also quotes (p. 57) an interesting passage from Fray Ramon Pane on wooden *zemi*: "When an Indian was passing by a tree which was moved more than others by the wind, the Indian in fear calls out, 'Who are you?' The tree responds, 'Call here a Bohii or priest, and I will tell you who I am.'" The passage then describes the questions which, after certain ceremonies, the medicine-man puts to the tree, as to its name, the locality where it desires to be set, and the ceremonies with which it is to be honoured; then it was cut down and a figure made from it. It may be that in early times if the tree-trunk were too small to furnish an image of adequate size, it was trimmed and bent into a hoop of the nature above indicated, and the symbol of the indwelling spirit cut upon the decorated panel and its border. Where anthropomorphic carvings are frequently found on the stone collars a *zemi* of this nature would necessarily be of somewhat ephemeral a nature, and it may be that a substitute was later carved from stone, and that finally the small tree-spirit was transferred to a stone habitation already prepared for it. The question of the "right-handedness" or the converse of a definite stone collar would depend on the relative length and stoutness of the limbs of the tree originally chosen as a habitation by the spirit which it represents. The reason of the hoop-form is difficult to explain unless it is supposed that these collars were suspended in some way.

The heavy collars, which appear to have been formed of a single and comparatively stout stem bent into a hoop and the ends secured by a bandage, may represent *zemi* made originally from the straight trunk of a tree without a fork.

I must admit that this suggestion—I should not like to dignify it by the term theory—does not seem to me at all conclusive; but, at worst, it is not less likely than the others, and perhaps even more likely than some, which have been put forward in explanation of these puzzling objects.

Plate LII, Fig. 5.

Stone collar, 423 × 290 mm.; slender oblique oval; left-shouldered; comparatively plain; no decorated panel, panel border, ridge, nor perforation; only in the region where the perforation should normally occur, the collar decreases slightly but abruptly in diameter. There is nothing worthy of remark in connection with the undecorated panel, border, groove, or pit; the shoulder ridge is narrow (width 20 mm.), and the projection plain.

(British Museum; Christy Collection, M.I., 144.)

Plate LIII, Figs. 1 and 3.

Stone collar, 425 × 310 mm.; slender oblique oval; right-shouldered; the so-called decorated panel is quite plain, though distinguished by a ridge; the border is also plain, and the perforation is present; the undecorated panel calls for no remark, and there is a slight projection on the border on each side of the pit. The arrangement of the design in the region of the shoulder-ridge and projection is, as far as I can discover, unique, and throws a good deal of light on the origin of these collars; instead of a "shoulder-ridge" there are two knobs, so arranged that the collar does not resemble a hoop with the two ends *lashed* together, but a hoop formed by hooking a projection on one end round a similar projection on the other, the two ends overlapping and shown clearly resting one on the other. The projection (which is the extremity of the short arm of the hoop) is furnished with a transverse ridge at the end.

(British Museum.)

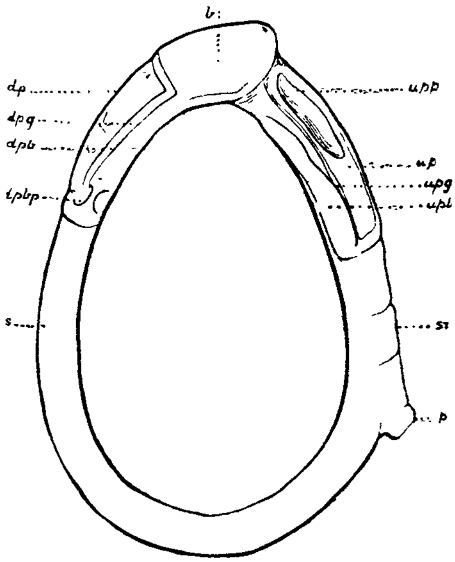

FIG. 1.

b.	Boss
dp.	Decorated panel.
dpg.	,, ,, groove.
dpb.	,, ,, border.
dpbp.	,, ,, ,, perforation.
s.	Shoulder.
upp.	Undecorated panel pit.
up.	Undecorated panel.
upg.	,, ,, groove.
upb.	,, ,, border.
sr.	Shoulder ridge.
p.	Projection.

Plate LIII, Figs. 2 and 4.

Stone collar; 455 × 305 mm.; slender oblique oval; right-shouldered; no decorated panel, but the panel border is divided by transverse engraved lines into four sections, each carved to represent a human face; these faces are disposed in pairs, chin to chin; there is no border perforation. The undecorated panel is normal, but the pit is very shallow, and on either side of it the border curves slightly but abruptly outwards. Only one extremity of the shoulder-ridge is shown; the "lashing" appearing to extend from the lower margin of the undecorated panel for the distance of 115 mm. The projection, which is well-marked, has a transverse ridge at the extremity.

(British Museum, 1904, 10–19, 1.)

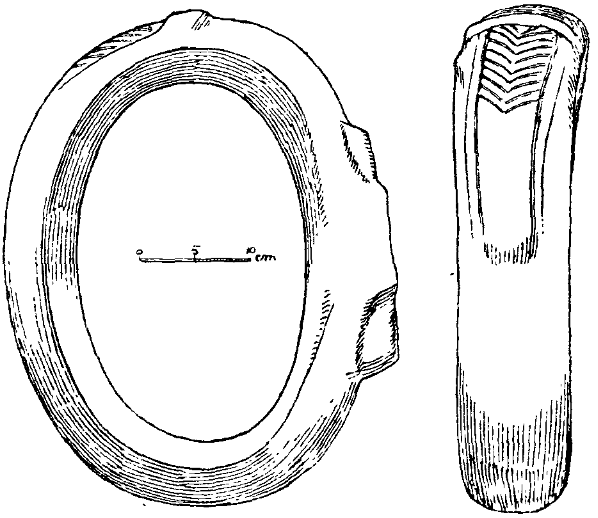

FIG. 2.

Fig. 2 Text.

Stone collar, cut from solid brown rock; massive type; 440 × 360 mm. The boss, usually absent in collars of this type, is represented in very rudimentary form by a narrow band in very low relief; the decorated panel is surrounded by a groove, and the upper half is ornamented with a series of engraved inverted chevrons. The "shoulder-ridge" is 92 mm. wide, and there is a projection above and below it, representing the two ends of the hoop, the shoulder-ridge itself representing the band which secures them. The weight of the specimen is 34½ lbs.

(British Museum; Christy Collection.)

STONE PESTLES.

Of stone pestles the British Museum possesses six examples (Plate LIV, 2–7). Five of these are of the type usually supposed to have been used for grinding pigment; the sixth (Plate LIV, 7) is of a different shape and much larger, and was probably used in the preparation of food. In describing these I have adopted the terminology of Fewkes (p. 99), who writes: "We can distinguish in each of these pestles four distinct parts: (1) head; (2) handle; (3) lens or base; (4) ferrule; the last being situated at the junction of lens and handle." Of the first four pestles, that are shown on Plate LIV, No. 5, and one not figured, were given to the Museum in 1825 by Mr. H. W. Brown. The following information accompanied them: "Found under the surface of the ground in a coffee plantation in Jamaica in 1820."

Plate LIV, 4 and 6, were purchased together for the Christy Collection in 1895, and were accompanied by no information.

Plate LIV, 3, was given to the Christy Collection in 1869 by Mr. W. J. Bernhard Smith, and was found at Petit Trou, S. Domingo.

Plate LIV, 4, I believe to have come originally from Jamaica, since it is distinguished by the peculiar facial grooves which are so noticeable in two of the wooden idols already described, and since Plate LIV, 6, formed part of the same purchase, I should regard it also as of Jamaican origin. At any rate, I do not think they can come from S. Domingo; it will be noticed that the specimen which comes indubitably from Jamaica has practically no "lens," while that from S. Domingo has a well-pronounced "lens," and so have all those from the latter island figured by Fewkes. The only alternative seems to be Porto Rico, since a specimen figured by Fewkes on Plate XXVI, C, seems to bear a close resemblance to Plate LIV, 6.

The remaining large pestle, Plate LIV, 7, was purchased at a sale in London, in 1904, together with the collar, Plate LIII, 2, and the three-pointed stone, Plate LII, 2, as well as the two ornaments, Plate LV, 8 and 9.

Plate LIV, Fig. 5.

Stone pestle, cut from solid pale brownish stone; length, 165 mm.; human head; the eyes represented by hollow circles in relief with deep pits in the centres, and the eyebrows by a continuous curved ridge across the forehead. The ears are shown in lateral relief and are represented as furnished with circular ear-plugs in the lobes. The handle increases in diameter towards the lens, which is only 8 mm. deep and very slightly marked; the under surface is nearly flat; diameter, 86 mm.

(British Museum, 25, 4–21, 1.)

(*Not Figured.*)

Coral pestle; length, 130 mm.; the head is too damaged to admit of the possibility of judging whether it was carved or not. The handle increases in diameter towards the base, which is undifferentiated. The under surface is flat; diameter, 76 mm.

(British Museum, 25, 4–21, 2.)

Plate LIV, 2 and 4.

Stone pestle; cut from solid brownish-buff coarse stone; human head, the eyes formed by hollow circles in relief, each set in a shallow depression which is continued down each cheek in the form of a shallow groove as in the wooden idols from Jamaica. The lower portions of these grooves are obscured by the hands, indicated in engraved outline, and represented as placed flat on the cheeks with fingers extended upwards; the arms and shoulders are also indicated in engraved outline. The ears are shown in low relief and are represented as furnished with circular ear-plugs in the lobes. The handle increases in diameter towards the base, which is merely a continuation of the former, and only differentiated from it by a shallow transverse groove encircling the pestle. The under surface is nearly flat; diameter, 72 mm.

(British Museum; Christy Collection, 95–65.)

Plate LIV, Fig. 6.

Stone pestle, cut from solid, dark, coarse, volcanic rock; length, 154 mm.; human head; the eyes are represented by two deep pits; the nose is broad and in high relief; the ears are shown in low lateral relief. A tranversely-grooved vertical band in low relief down the back of the head may represent hair. The handle increases regularly in diameter towards the base, which is in no way differentiated from it; the under surface is practically flat; diameter, 79 mm.

(Museum number, 95–61.)

Plate LIV, Fig. 3.

Stone pestle, cut from solid, dark, coarse, volcanic rock; length, 143 mm. Head, in form of a crouching-figure with projecting lower lip, and a ridge of hair across the head. The handle is slightly swollen midway; the ferrule is broad and the lens angular and smooth; diameter, 101 mm.

(British Museum; Christy Collection, 5269.)

Plate LIV, Fig. 7.

Stone pestle, cut from solid, pinkish-brown, coarse rock; length, 420 mm. Head, a bird with disproportionately long beak; the eyes are formed by circular depressions; the wings are in lateral relief with engraved indication of feathers; the handle is long and practically cylindrical, and the base, which is undifferentiated, is rounded; diameter, 78 mm.

(British Museum, 1904, 10–19, 3.)

STONE RUBBERS.

Closely allied to the pestles are the following two stone carvings which may perhaps be described as rubbers, as the under surface, which is rounded, in each case shows signs of friction. Unfortunately, there is no evidence as to the locality in which they were found. It may be noticed that the first described bears a close resemblance to the "stone bird" figured on p. 194 of Fewkes' monograph.

Plate LIII, Fig. 8.

Stone rubber; cut from solid, hard, brown stone; figure of a bird sitting with folded wings on an oval base; the beak rests on the breast; the eyes are in relief with a small oval pit representing the pupil; engraved lines on the wings indicate feathers.

(British Museum; Christy Collection, 9878.)

Plate LIV, Fig. 1.

Stone rubber; cut from solid, hard, black rock; female figure lying on back, with knees drawn up, on an oval base; eyes, nose, mouth, outline of face, breasts, arms and legs are shown in relief.

(British Museum; Christy Collection, 9877.)

Both specimens were given by Mr. A. W. Franks (afterwards Sir A. Wollaston Franks, K.C.B.) in 1876.

STONE CELTS.

As regards stone celts, the British Museum collection is rather unequal, certain islands, such as Cuba, being represented only by a single specimen. At the same time, three islands are well represented: Barbados by a good series of shell axe- and adze-blades, and a few of stone (which must have been imported into the island); Jamaica by a large collection of beautiful celts nearly all petaloid in form; and St. Vincent. Besides these there are a number of Carib celts to which no locality is assigned, but which probably came from St. Vincent; as well as the best specimens from the collection of Sir Graham Briggs from St. Kitts and Nevis.[1]

I regret that, for want of space, I am unable to figure any of the Jamaican celts, many of which, as far as symmetry of outline and brilliancy of polish are concerned, are unsurpassed from any country; but I may mention in passing that, besides the petaloid type, the Museum possesses a few of a gouge- or chisel-shaped pattern tapering very slightly towards either end, oval in section, ranging from 127 mm. to 62 mm. in length and measuring only 22 mm. to 15 mm. in breadth.

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[1] Many of these are figured in an article by Mr. (now Sir Everard) im Thurn in *Timehri* Vol. III.

A few of the long series of Carib celts from St. Vincent and other islands of the lesser Antilles are shown in outline herewith (Fig. 3, text). The specimens reproduced have been selected with a view to show the greatest variety of form rather than perfection of outline, and the Museum possesses many "intermediate" types of striking workmanship, ranging from heavy thick blades 295 mm. in length to small "miniatures" of 35 mm. It is unnecessary to describe in detail those figured, but it may be remarked that No. 12 is unusually thin, measuring only 15 mm. at its thickest part. The projection seen on either side of the "handle" end in some specimens remind one irresistibly in some cases of the beaks of birds of prey (especially Nos. 6 and 7), and it may be that such was the original design.

The following information is all that will be necessary concerning them :—

Nos. 1, 9, 11 and 15. St. Vincent; given by A. W. Franks, Esq., 1872. (Checkley Collection). (British Museum; Christy Collection, M.I., 182, 186, 172, and 178.)

No. 3. St. Vincent, Layou Valley, same donor, 1873. (British Museum; Christy Collection, M.I., 124.)

No. 8. Grenada; same donor, 1869. (British Museum ; Christy Collection, M.I., 125.)

No. 2. Trinidad; purchased 1875 (Sparrow Simpson Collection.) (British Museum; Christy Collection, 9473.)

Nos. 4, 7 and 17. Given by A. W. Franks, Esq. (Sir Graham Briggs Collection.) (British Museum; Christy Collection, X4394, X4393 and X4397.[1])

No. 6. "The Caribes" (Queckett Collection) 1861. (British Museum ; Christy Collection.)

Nos. 10 and 13. "The Caribes" (British Museum; Christy Collection).

Nos. 5, 12, and 14. Purchased 1898 (British Museum, 1898, 6-25, 4, 6 and 1.)

CARVED CELTS. *Plate LV.*

Four important specimens still require mention: those figured on Plate LV Figs. 1 to 4. These celts are "petaloid" in type, and on each a human figure or bust is carved in relief on one side.

Fig. 1 alone shows the whole figure; it is carved from coarse, brownish trap-rock, and is not polished ; length, 199 mm.

(British Museum; Christy Collection, M.I., 128.)

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[1] This is exactly similar to a more damaged specimen from St. Vincent.

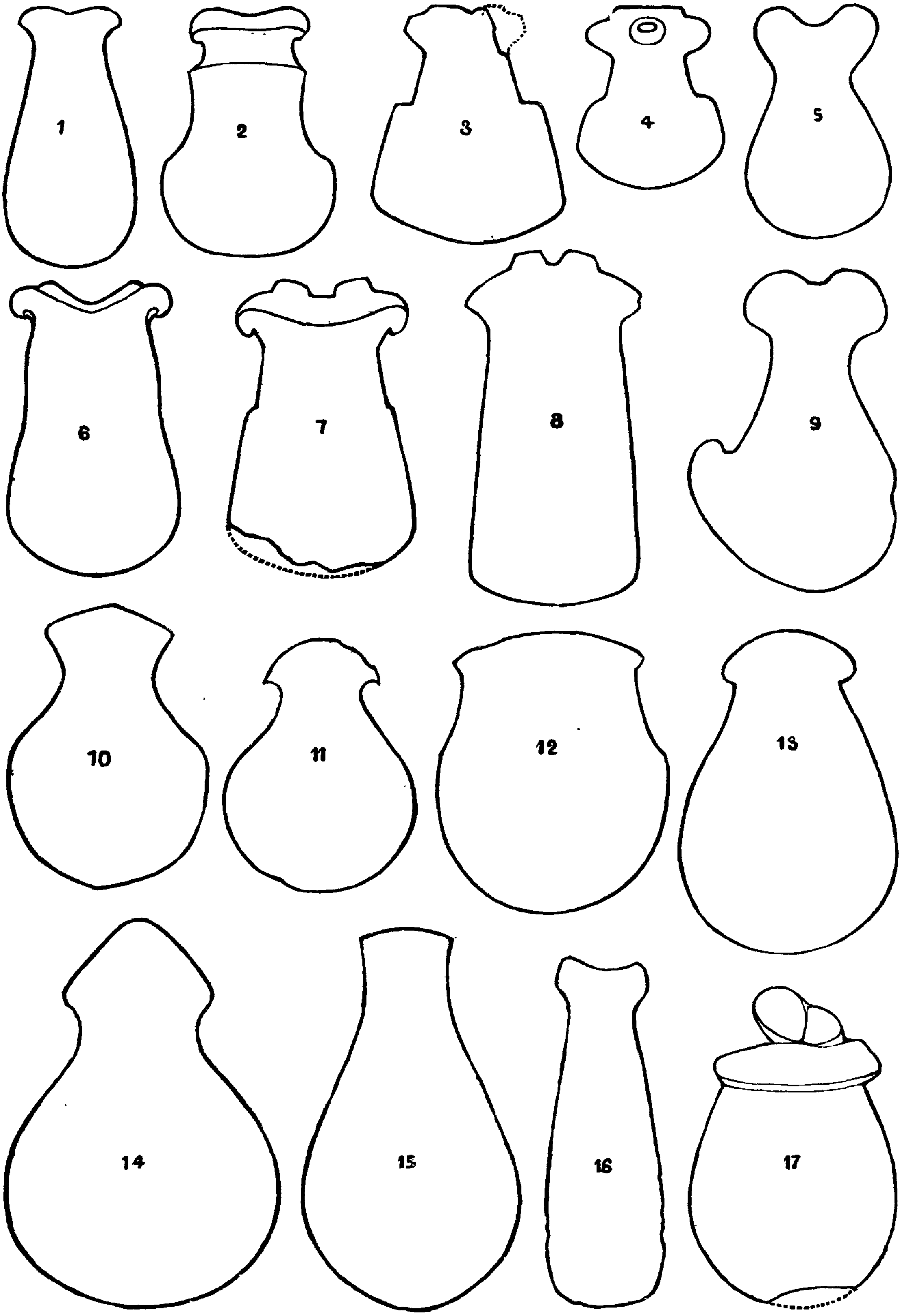


FIG. 3.—CARIB CELTS FROM THE LESSER ANTILLES. *Scale, ¼ linear.*
(British Museum.)

Fig. 2 is of coarse greyish-buff rock, also unpolished, and shows a human face and arms; length, 228 mm. It was originally in Lord Aberdeen's Collection, and became part of the Christy Collection in 1862.

(British Museum; Christy Collection, M.I., 127.)

Fig. 3 is carved from dull greenish-brown stone, polished; human face and arms; length, 205 mm. It was given in 1885 by Mr. A. W. (afterwards Sir Wollaston) Franks.

(British Museum; Christy Collection, X2513.)

Fig. 4 is of dark green stone, also polished; human face and arms; length, 275 mm. It was purchased with the Morel Collection in 1901 and bears a label, "Collection Dr. Amstelm; Forêt des Ardennes."

(British Museum, Ml. 1195.)

Unfortunately, none of the specimens possess a locality (except the last, which is obviously incorrect), but they are probably from S. Domingo.

Plate LIV, Fig. 8.

Finally, there is the beautiful specimen of stone carving shown on Plate LIV, 8, consisting of an entire axe and haft, carved from solid, fine-grained, pale-greenish stone, well polished. The design represents a petaloid celt fixed in a wooden haft which is secured from splitting by a binding above and below the blade. This axe, which is 316 mm. long, was given to the British Museum in 1830 by Mr. P. L. Strachan. All the information which accompanied it is contained in the following words:—"A curiously shaped Indian Battle Axe made of a green siliceous stone."

(British Museum, 30, 5–8, 1.)

MISCELLANEOUS STONE OBJECTS. *Plate LV.*

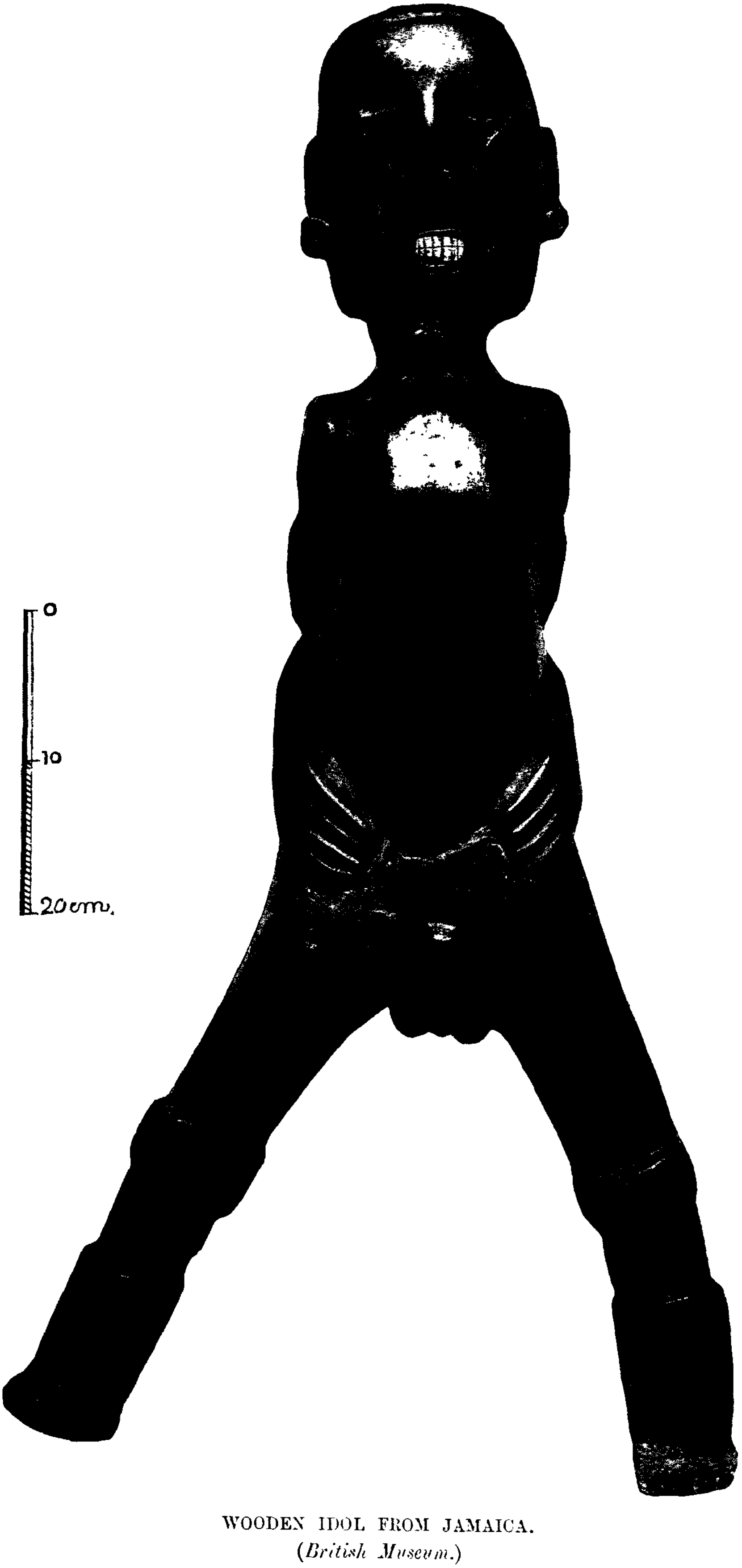
Plate LV also shows a small selection from the miscellaneous stone objects in the collection. The peculiar specimen, Fig. 5, was obtained in 1861, and is cut from greyish-brown trap-rock; the transverse section is a flattened oval and at the upper extremity the implement—for such it seems to be—is furnished with a well-defined cutting edge. The specimen is all the more interesting since it seems to be a perfect example of the type to which belongs the fragment figured on Plate XXIII, k, of Fewkes' monograph; length, 205 mm.

(British Museum; Christy Collection, M.I., 126.)

Fig. 6, obtained in 1873, also cut from dark trap-rock, is in the form of an isosceles triangle with incurving sides; the edges are rounded and the curve seems to have been produced by use as a polisher; length, 83; Buccament Valley, St. Vincent.

(British Museum; Christy Collection, M.I., 258.)

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate XLVIII.*



WOODEN IDOL FROM JAMAICA.
(*British Museum.*)

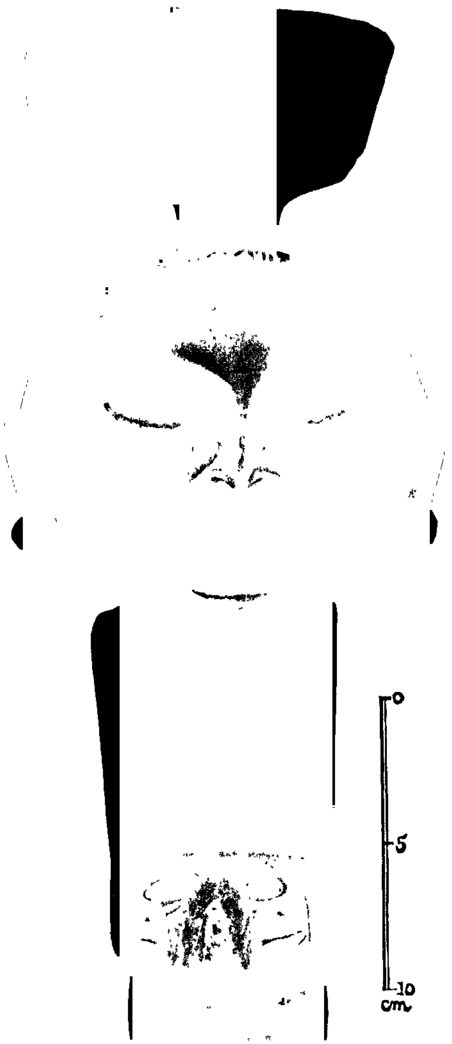


FIG. 1.

FIG. 2.

WOODEN IDOL FROM JAMAICA (*British Museum*).

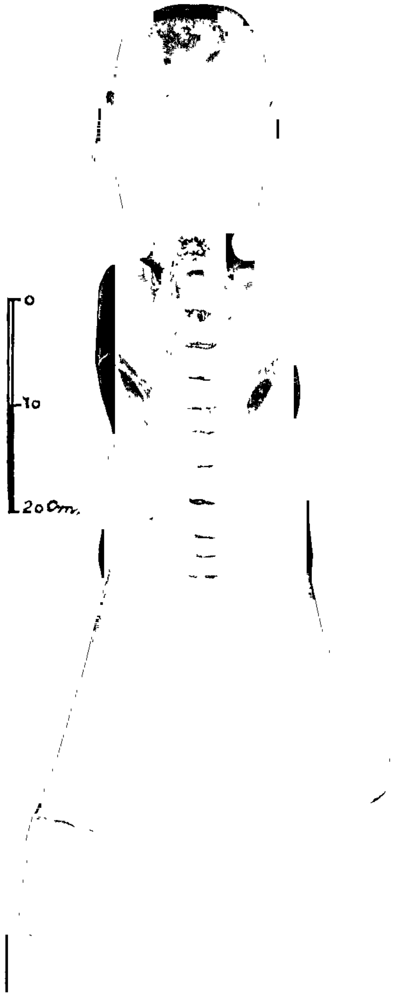


FIG. 3.

BACK VIEW OF PL. XLVIII.

WOODEN IDOL FROM JAMAICA.
(British Museum.)

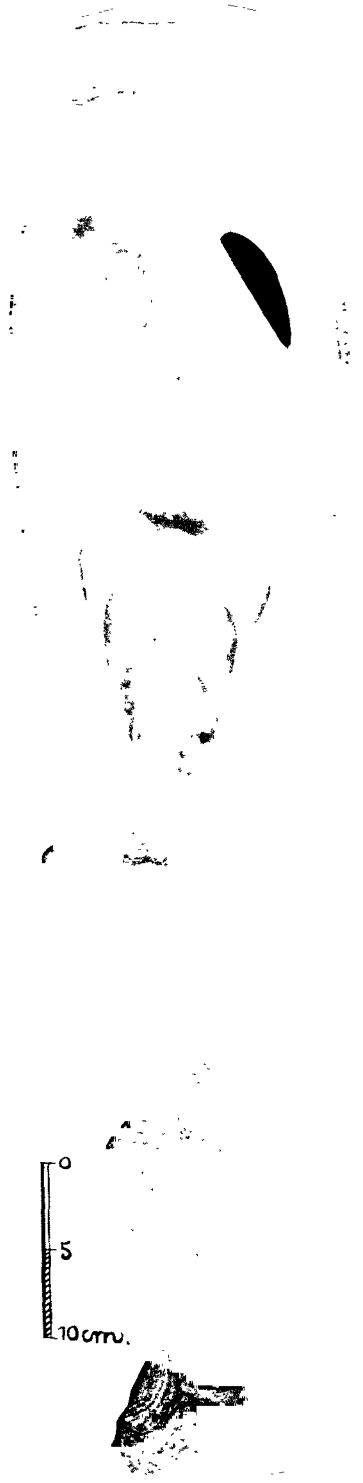


FIG. 1.—WOODEN IDOL FROM JAMAICA.
(*British Museum.*)

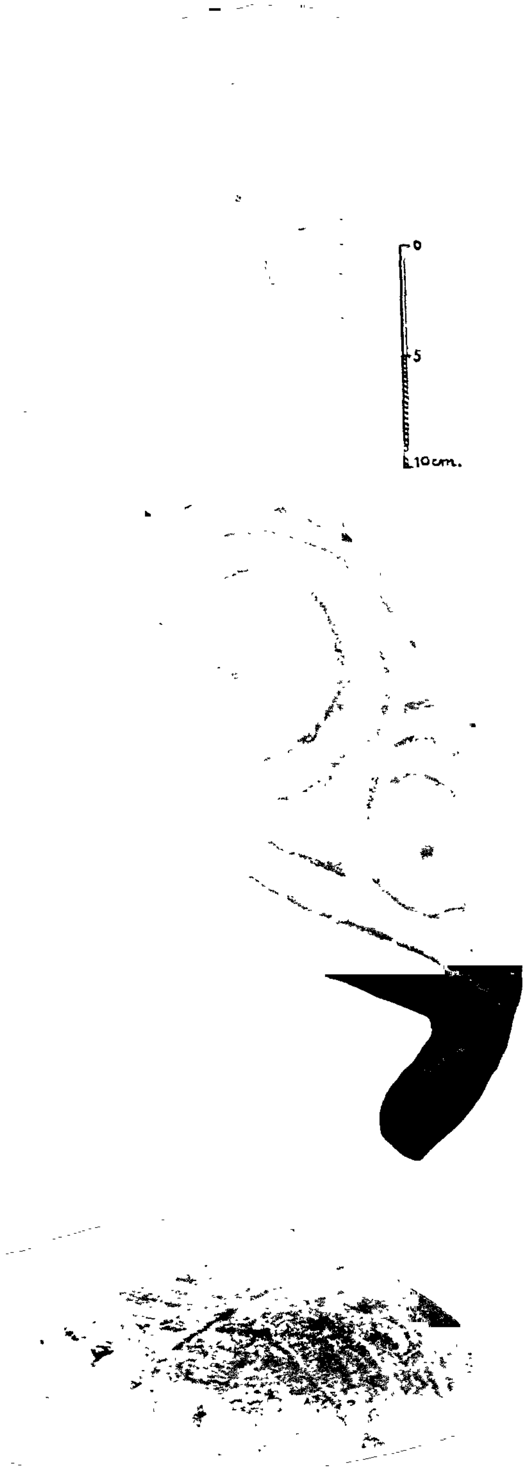


FIG. 2.—WOODEN IDOL FROM THE ANTILLES.
(*British Museum.*)

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate LII.*

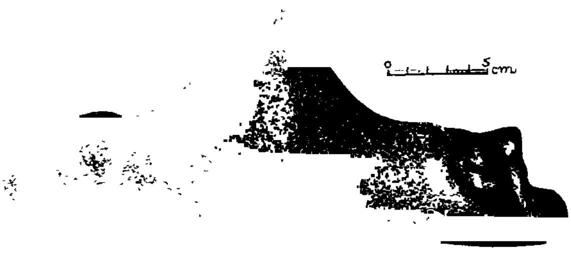


FIG. 1.

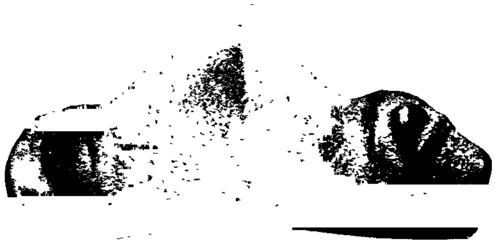


FIG. 2.

THREE-POINTED STONES (*British Museum*).

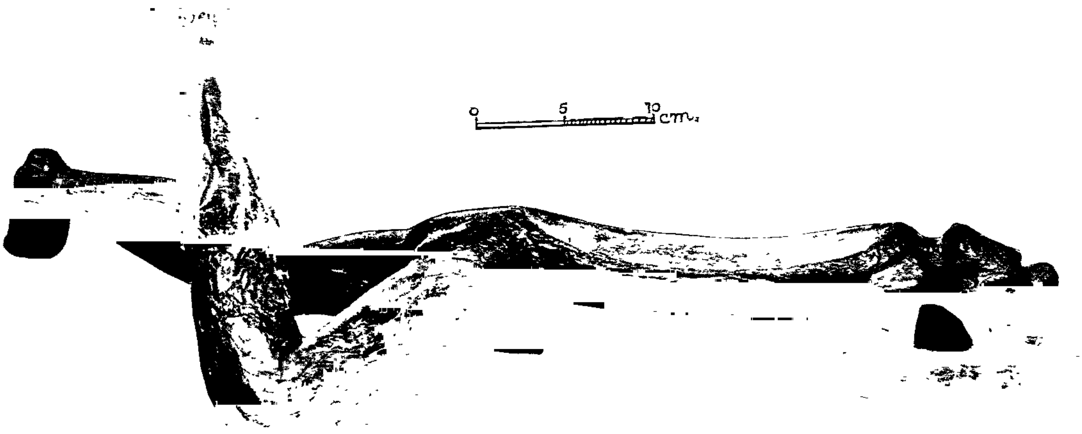


FIG. 3.—WOODEN SEAT FROM S. DOMINGO (*British Museum*).

FIG. 4.

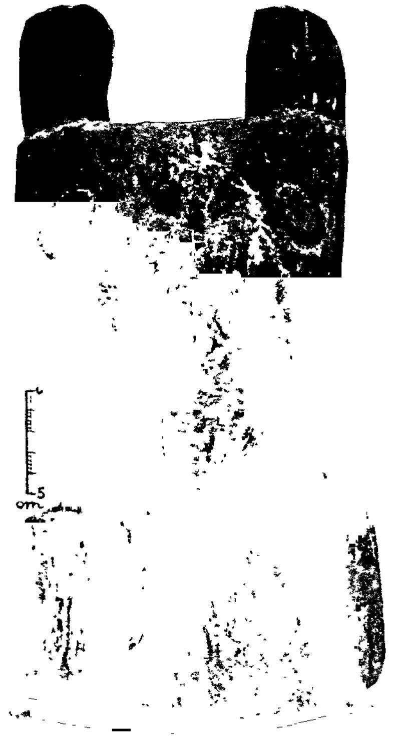


FIG. 5.

WOODEN IDOL FROM THE ANTILLES (*British Museum*).

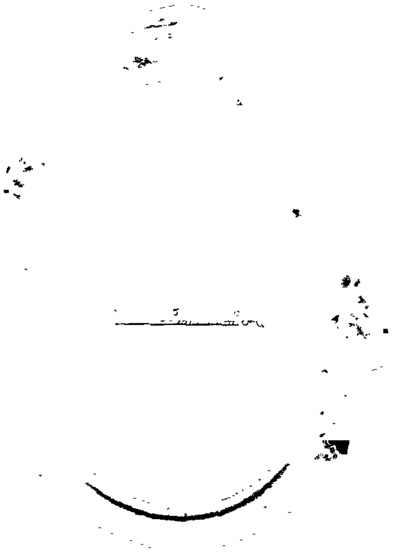


FIG. 1.

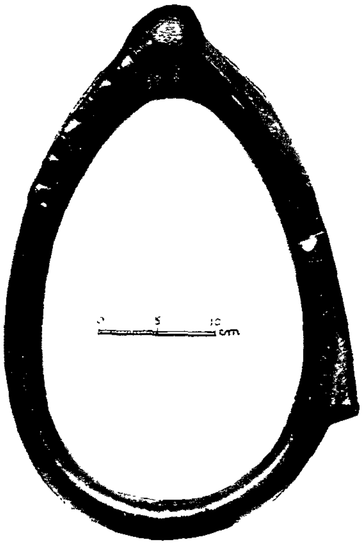


FIG. 2.

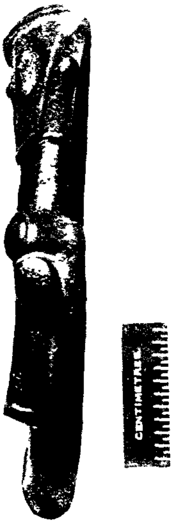


FIG 3.

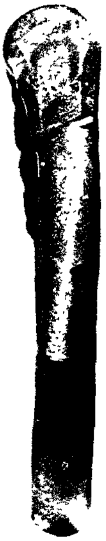


FIG. 4.

STONE COLLARS FROM THE ANTILLES (*British Museum*).

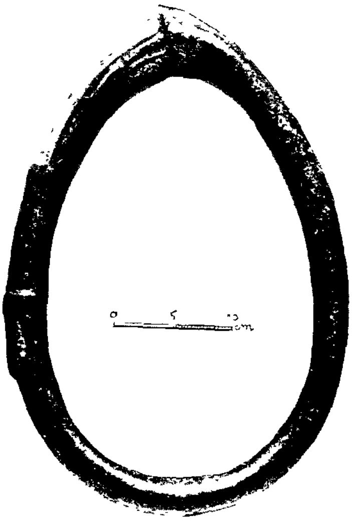


FIG. 5.

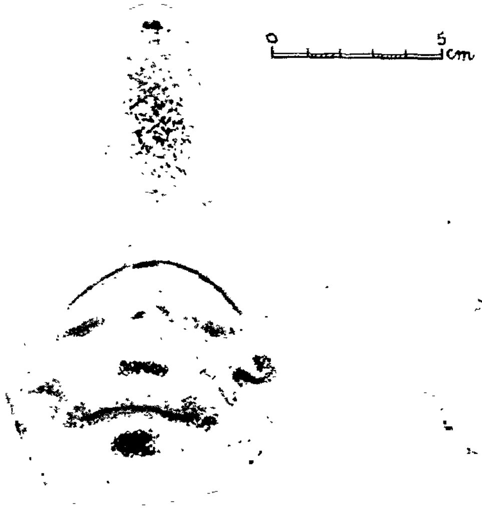


FIG. 6.

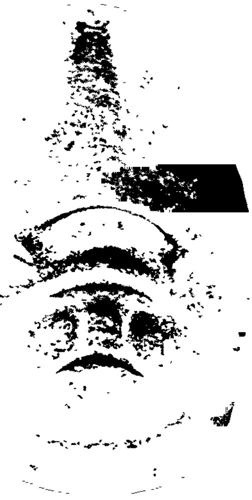


FIG. 7.

FACE-VIEW OF PL. LII, FIGS. 1 AND 2.

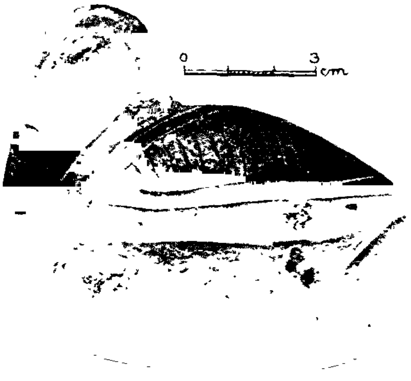


FIG. 8.—STONE RUBBER FROM THE ANTILLES (*British Museum*).

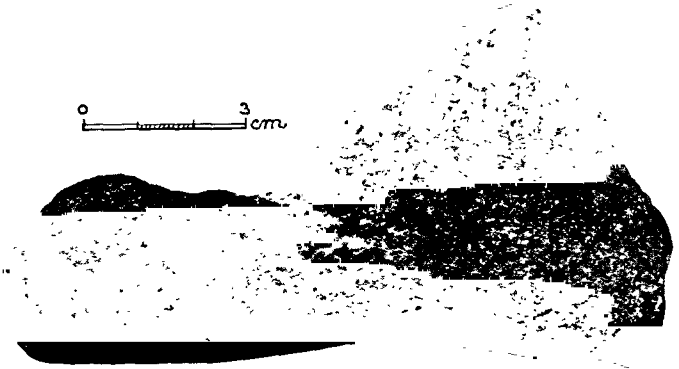


FIG. 9.—THREE-POINTED STONE FROM S. VINCENT (*British Museum*).

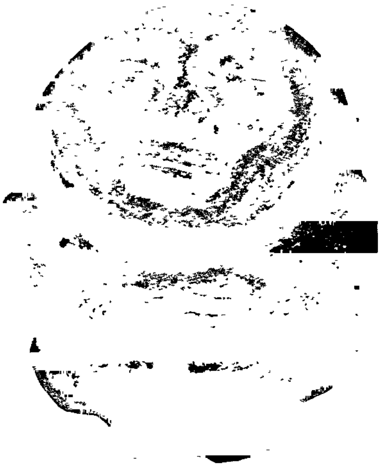


FIG. 1.—STONE RUBBER FROM THE ANTILLES (*British Museum*).

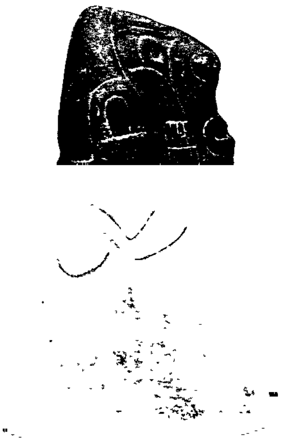
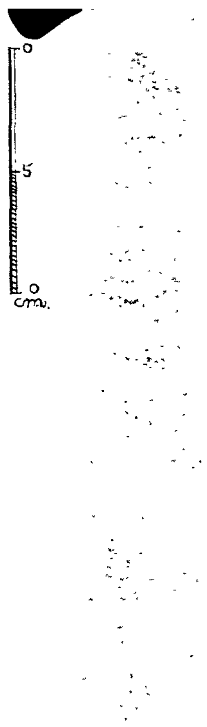


FIG. 2.

FIG. 3.



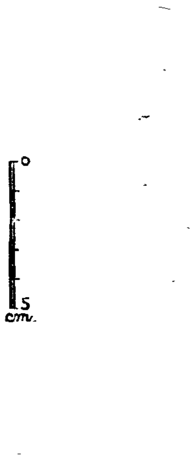


FIG. 4. FIG. 5. FIG. 6.
STONE PESTLES FROM THE ANTILLES (*British Museum*).

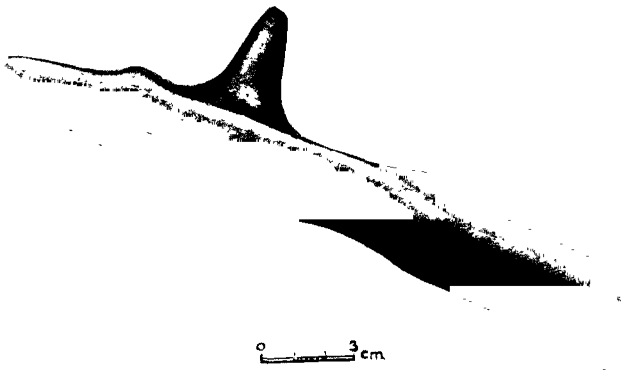


FIG. 7.—STONE PESTLE FROM THE ANTILLES (*British Museum*).

FIG. 8.
STONE AXE FROM THE ANTILLES (*British Museum*).

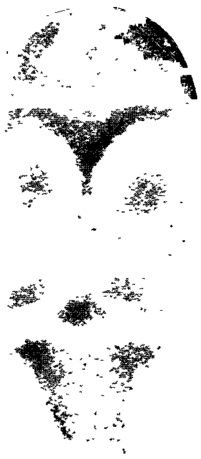


FIG. 1.

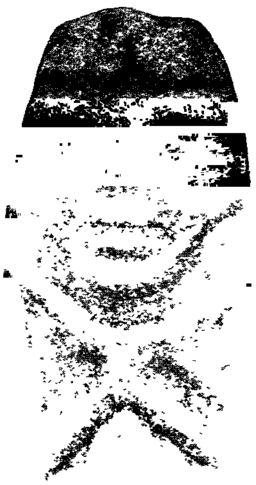


FIG. 2.

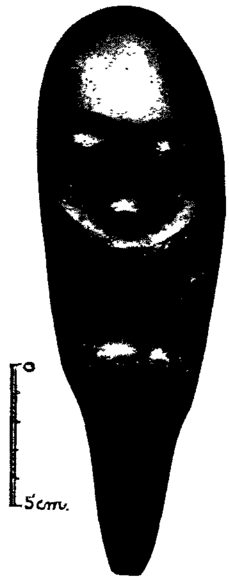


FIG. 3.

FIG. 4.

CARVED CELTS FROM THE ANTILLES (*British Museum*).

FIG. 8.

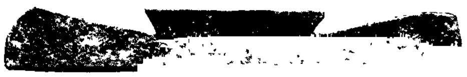


FIG. 9.

FIG. 5.

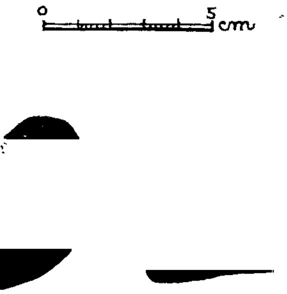
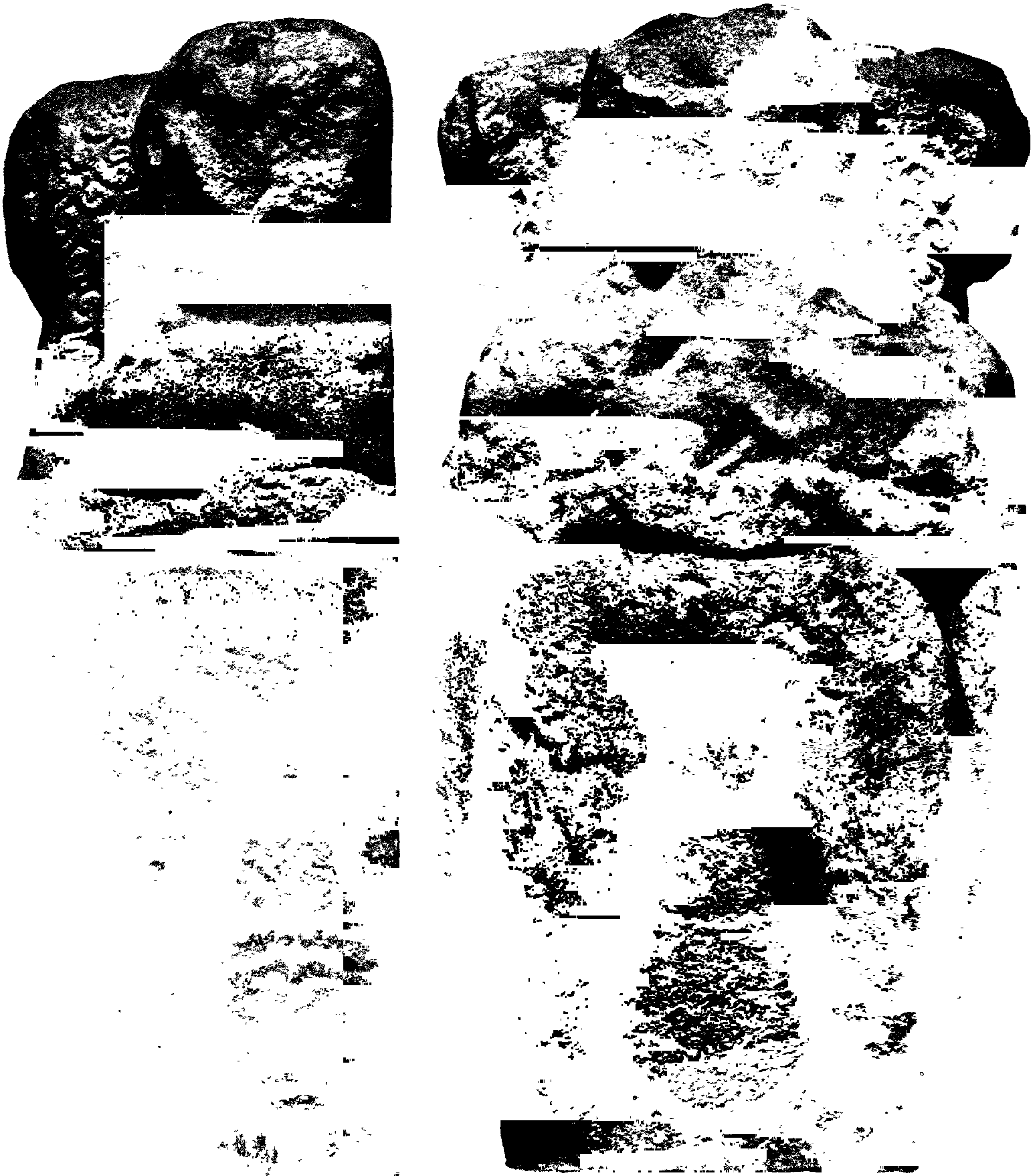


FIG. 6.

FIG. 7.

MISCELLANEOUS STONE OBJECTS FROM THE ANTILLES (*British Museum*).

Journal of the Royal Anthropological Institute, Vol. XXXVII, 1907, *Plate LVI.*



LARGE STONE CARVING FROM THE ISLAND OF NEVIS (*British Museum*).

Fig. 7, obtained at the same time as Fig. 6, is cut from coarse black stone taking a dull polish; the edges are rounded; the peculiar asymmetry of outline is difficult to explain; diameter, 114 mm. It was found in St. Vincent.

(British Museum; Christy Collection, M.I., 238.)

Figs. 8 and 9 were both purchased at a sale in London in 1904, together with the collar, three-pointed stone and large pestle shown on Pl. LIII, 2, Pl. LII, 2, and Pl. LIV, 7, respectively. They are said to be ornaments worn by Caçiques, and are cut from a peculiar grey and buff marbled stone which takes a high polish. They are very thin, the larger measuring only 5 mm. at the thickest part, and the edges are bevelled. The shape resembles half a Maltese cross, of which one pair of arms is considerably longer than the other, divided along the longer diameter; lengths, 212 mm. and 142 mm. respectively.

(British Museum; 1904, 10–19, 4 and 5.)

PILLAR STONE. *Plate LVI.*

A remarkable pillar-stone is shown on Plate LVI: it is a quadrangular column of white sandstone, sculptured on three faces with a standing male figure, that in the centre with arms locked over one arm of each of those on either side; the hands of all are laid flat across the body and the fingers interlaced. These figures have long hair hanging in spiral curls; their legs are wide apart, and between the calves of each is sculptured a grotesque human face with a kind of palmette springing from the head. The figures on either side of the central figure are incomplete, lacking one arm and leg, and the remaining side of the column, and the top and bottom, are squared and dressed but left plain. A square vertical hole has been sunk in top and bottom. H., 610 mm.; B., 335 mm.; D., 210 mm. This pillar-stone came from the island of Nevis; it was acquired by Sir Graham Briggs, and in 1889 was given to the Christy Collection by Mr. (afterwards Sir Wollaston) Franks.

(British Museum; Christy Collection, X4419.)

POTTERY.

The museum collection also includes a number of fragments of pottery from Barbados, St. Vincent and S. Domingo, but none of them are sufficiently noteworthy to merit any special remark.

of Great Britain and Ireland,' and that such change shall take effect as from the date of registration of consent of the Board of Trade."

The motion was seconded by Mr. RUDLER and carried unanimously.

The CHAIRMAN proposed the second special resolution:—

"That the Composition payment, as settled by Article 10, be raised from £21 to £31 10*s*. 0*d*., and that Article 10 do read as follows:—'Each Member shall pay an annual contribution of Two Guineas, which may at any time be compounded for by a payment of £31 10*s*. 0*d*."

The motion was seconded by the TREASURER and carried unanimously.

June 4th, 1907.

Prof. W. GOWLAND, ex-President, in the chair.

Miss FREIRE-MARRECO exhibited a number of flints from the base of the Pebbly series at Southwold.

The exhibit was discussed by Messrs. MYRES, BALFOUR, HADDON, WARREN and the CHAIRMAN, and Miss FREIRE-MARRECO replied.

Mr. H. BALFOUR read a paper on "The Origin and Geographical Distribution of the Friction-drum" (p. 67).

The paper was discussed by Messrs. TORDAY, HADDON, THOMAS, and the CHAIRMAN.

June 25th, 1907.

Mr. F. W. RUDLER, ex-President, in the chair.

Mr. F. S. BROCKMAN exhibited a number of lantern slides illustrating Australian Aboriginal Rock-paintings in North-west Australia.

Dr. DAVID WATERSTON read a paper on "The Kanaka Skull," and subsequently gave a demonstration of instruments employed to obtain contour tracings of different aspects of the skull.

November 5th, 1907.

Prof. D. J. CUNNINGHAM, F.R.S., President, in the chair.

The election was announced of Mr. F. ATLAY, Dr. H. A. AUDEN, Messrs. E. F. COLVILLE, W. CREWDSON, J. DON, Miss FREIRE-MARRECO, Dr. C. PEABODY, Messrs W. P. PYCRAFT, N. SNELL, J. STEWART and H. S. WELLCOME as Ordinary Fellows of the Institute.

The PRESIDENT handed to Prof. E. B. TYLOR the Huxley Memorial Medal, presented to him by the Royal Anthropological Institute on the occasion of his seventy-fifth birthday, in commemoration of his lifelong services to the Science of Anthropology. At the same time, on behalf of the Institute, he presented to Mrs. TYLOR a framed portrait of her husband. Prof. TYLOR replied.

Sir EDWARD BRABROOK, ex-President, having taken the chair, Prof. D. J. CUNNINGHAM read a note on "A Method of ascertaining the stature and making other measurements of the living person."

The paper was discussed by Dr. HADDON, Dr. KEITH, Mr. GRAY and Mr. SMURTHWAITE, and Prof. CUNNINGHAM replied.

Prof. CUNNINGHAM having resumed the chair, Mr. N. W. THOMAS exhibited a number of so-called "gravestones" from New South Wales.

The exhibit was discussed by Prof. TYLOR, Mr. TABOR, Mr. CROSS and Dr. VISICK, and Mr. THOMAS replied.

November 19*th*, 1907.

Mr. F. W. RUDLER, ex-President, in the chair.

The election was announced of Dr. A. CAMPBELL GEDDES as an Ordinary Fellow of the Institute.

Mr. S. HAZZLEDINE WARREN read the following papers on behalf of the authors, Mr. B. C. POLKINGHORN and Mr. H. C. KING :—

i. "Excavations in a Barrow at Chapel Carn Brea, Cornwall."
ii. "Holed Stone at Kerrow, St.-Just-in-Penwith, Cornwall."
iii. "Small cist and urn at Tregiffian Vean, St.-Just-in-Penwith, Cornwall."

The papers were discussed by Mr. LEWIS, Dr. WRIGHT and Mr. WARREN.

Mr. W. W. SKEAT read on behalf of the author, Mr. F. W. KNOCKER, a paper on "The Wild Tribes of the Ulu Plus." Mr. Skeat added some remarks on the paper, which was discussed by Mr. GRAY, Dr. CAMPBELL and Mr. SMURTHWAITE, and Mr. SKEAT replied.

December 3*rd*, 1907.

Prof. W. GOWLAND, ex-President, in the chair.

The election was announced of Mr. J. J. JUDGE and the Rev. M. A. PRICKETT as Ordinary Fellows of the Institute.

Captain F. R. BARTON, C.M.G., read a paper on "Some Papuan Children's Games."

The paper was discussed by Mr. EDGE-PARTINGTON, Dr. CAMPBELL, Sir RICHARD MARTIN and the CHAIRMAN, and Captain BARTON replied.

December 17*th*, 1907.

Prof. W. GOWLAND, ex-President, in the chair.

The election was announced of Dr. MOTT and Dr. BOND as Ordinary Fellows of the Institute.

The CHAIRMAN announced that the President had appointed Messrs. PYE and RUDLER as auditors of the accounts for 1907.

The Rev. R. ASHINGTON BULLEN exhibited a slate needle and stone amulet from Harlyn Bay, Cornwall.

The exhibit was discussed by Mr. LEWIS and the CHAIRMAN.

Mr. A. L. LEWIS, Vice-President, having taken the chair,

Prof. GOWLAND read on behalf of the author, Mr. W. G. ASTON, C.M.G., a paper on "A Japanese Book of Divination," which was exhibited.

Prof. GOWLAND resumed the chair and made some observations on the paper.

Questions were asked and the paper was discussed by Miss BRETON, Mr. LEWIS and Mr. HODSON.

Mr. A. L. LEWIS read a paper entitled "A Note on some Excavations intended to be made at Avebury."

The paper was discussed by Mr. YOUNG, Miss BRETON and the CHAIRMAN.

PROPOSED NATIONAL ANTHROPOMETRIC SURVEY.

Verbatim Report of the Deputation from The Royal Anthropological Institute, The Sociological Society, The Childhood Society, The Royal College of Surgeons (England), The Royal Society (Edinburgh), The British Science Guild, and the Royal Statistical Society, to the Right Hon. Sir Henry Campbell-Bannerman, M.P., Prime Minister, on Tuesday, March 5th, 1907.

The PRIME MINISTER: Gentlemen, my first duty is to tender to you my sincere apology for keeping you waiting, but I was called away to Lady Ripon's funeral service, and I could not break it off in time to get here.

Mr. LEHMANN: It is my privilege, Sir Henry, to introduce to you this morning a deputation organised by the Royal Anthropological Institute. They have come to you to lay before you their views on a matter of great interest from a national point of view. We know that your time is valuable, and we will make our remarks as short as conveniently may be. The subject on which we wish to ask your attention for a few moments is with regard to the Anthropometric Survey. The matter practically dates back to 1903, when a Departmental Committee was appointed. That Committee reported in July, 1904. Their recommendations were, first, that an Anthropometric Survey should be held; and, secondly, that an Advisory Council for this purpose should be established; and that the Advisory Council should contain representatives of the Departments of State with the addition of experts, and that the Survey should collect and analyse data for the information of the Advisory Council. Questions relating to physical deterioration and degeneracy generally are in the air, and we all have our own views upon the matter. But the great fault of all is the failure of reliable data. Now, we feel that if it were possible to establish, by means of an anthropometric survey, data extending from year to year and from generation to generation, we should have in those a definite guide as to the direction in which social efforts should trend. Now, these matters will be explained to you, in greater detail than I have been able to explain, by other gentlemen. I might say, however, that the machinery is ready for establishment; the men are ready to work it; all that is wanted is motive power, and the motive power is money. But the sum that these gentlemen ask for is a small one. Their very modest request is for a sum of from £4,000 to £5,000 to enable them to establish this machinery and to set to work. Medical inspection has been sometimes put forward as a substitute for what they propose to do, but although we recognise fully the value of that, and although we hope very sincerely that it may be possible in this session of Parliament to put a non-controversial part of last year's Bill on the Statute Book, medical inspection is no substitute. For there may be an absence of disease, and yet that would afford no proof of physical deterioration not having taken place. It is with the question of physical deterioration that the Anthropometric Survey would deal.

Now I wish to leave the gentlemen, who compose the Deputation, as shortly as may be to state the case. I will call on Dr. Cunningham.

Prof. D. J. CUNNINGHAM: Sir, we consider it a very great privilege to be permitted to appear before you to-day on a matter on which we are much interested, and I feel that we can best show our appreciation of your courtesy by stating our case as briefly as it is possible to do so.

I can hardly imagine any subject of more importance to the State than the physical welfare of the people; and yet, when a few years ago a note of warning was given that all was not well with us in this respect, and when, in consequence, a Departmental Committee was appointed to look into the matter, it became apparent that little or nothing was known in regard to the national physique, and that the evidence at the disposal of the committee regarding the physical condition of the different sections and classes of the British people, both past and present, was of the most unsatisfactory and meagre kind.

In the course of the inquiry it was brought out that the only sources of information which we possessed on this important question were :—

1. Statistical records of the recruits who present themselves for admission into the Army—a source of information which was soon proved to be very misleading—and,
2. Anthropometrical data which have from time to time been collected by anthropologists, by educationalists who are interested in the growth of school children, and by others who have employed the anthropometric method to test the effect of factory life on the physical condition of the young.

These anthropometrical data are admittedly very incomplete. They are not sufficient to give a satisfactory idea of the national physique in its manifold aspects, and much less are they capable of affording evidence on the all-important question as to whether the physical standard of the people presents an upward or a downward tendency.

They establish, no doubt, certain general principles of great importance, but for the present purpose they are chiefly useful in showing us that results of the utmost value to the State would ensue if an investigation conducted on similar lines were carried out on a scale sufficiently wide to embrace all sorts and conditions of the people.

In short, private enterprise is not capable of collecting the mass of facts which are required to pass a judgment on so large a question as the physical well-being of the different sections of the British race.

Further, owing to the divergency of the methods employed by different enquirers, data acquired in this way do not possess the same value as those collected by a central body, which would control and regulate the manner in which the work is carried out, and thus ensure uniformity in the results obtained.

It is all very well to talk of physical degeneration, to insist upon the importance of maintaining the high standard of physical excellence which we believe to be the heritage of the British race, and to indulge in speculative fancies regarding the developmental tendencies of the people of the present day; such discussions are, no doubt, interesting from an academic point of view, but they can lead to no real, practical or useful issue until they are based on a solid foundation of acquired scientific information.

At the present moment such a foundation does not exist, and we are here to-day for the purpose of representing the importance of instituting an anthropometric survey of the whole country, by means of which sufficient samples of the people of different districts and of those living under different conditions may be examined with the object of establishing a record of their physical and mental characters, and of the manner in which these are affected by the surroundings amidst which the people live.

During the last half century or so the conditions of living have altered enormously. Indeed, it may be questioned if at any other time in a similar period of history so great a disturbance in this respect has taken place. No fact is more fully established than this, that environment and nurture exercise the most marked influence on the growth of the child and also upon the standard of physical excellence attained by the adult. It is reasonable, therefore, to suppose that these changed conditions of life have not been unattended by some effect on the physical standard of the people. The recent observations of Dr. Kerr have also shown that in school children physical efficiency goes hand in hand with educational progress and mental efficiency.

Prof. Lloyd Morgan states that if we had the necessary information we should probably find that the people of these Islands, from the physical point of view, were ranged in three great cohorts:

1. Those who show signs of physical degeneration.
2. Those who are stationary in so far as their physical characters are concerned.
3. Those who show signs of physical improvement.

If this be the case—and what evidence we have seems to point that way—then it becomes a matter of vital importance to discover the relative strengths of these different cohorts, and also whether any one of them is gaining in numbers at the expense of the others. This can only be done by making the survey permanent and continuous. By this means alone, as time goes on, we (or I should, perhaps, say our successors) would have the opportunity of comparing the physical characters of one generation with those of another.

It is needless for me to elaborate at greater length arguments in favour of this proposal. The scheme for the institution of a periodic anthropometric survey of the whole country has been ably discussed by the Interdepartmental Committee on Physical Deterioration, and occupies a place in the forefront of their recommendations; it has received the official approval and the warm support of the Royal College of Physicians, the Royal College of Surgeons, the Science Guild, the Royal Society of Edinburgh, and also of numerous other public and scientific bodies, representatives from many of which are here to-day to testify their interest in the proposal.

A statement dealing with details of organisation and finance, which has been prepared by my colleague, Mr. Gray, has been placed, Sir, in your hands. On one point only would I wish to supplement that statement. Should the Government decide to support the scheme which we advocate, they would find many public bodies eager and willing to co-operate with them in carrying the proposal into effect.

The fact that, more than twenty years ago, at a time when the public mind was little prepared to appreciate the important issues involved, the British Association endeavoured to grapple with the question single-handed, and spent, for a period of five years, much money and labour in its furtherance, is sufficient to show how strongly the matter appeals to the scientific mind. And in this connection it is only proper that we should pay a tribute to Mr. Galton, the chairman of that committee, and to Sir Edward Brabrook, who acted as its secretary, and whose interest in the work is as keen and as lively as ever.

So far as the survey of school children is concerned, almost all the machinery which is required is already in existence. Given the institution of a central bureau, we only need (1) the provision of the necessary instruments, and (2) the means of training the teachers who would act as recorders.

In Scotland we are so fortunate as to possess, in the ancient and Royal Borough of Dunfermline, a splendid college, endowed by the munificence of Mr. Carnegie and most wisely administered, which is admirably adapted to supply the second of these requirements. The Trustees have indicated their readiness to undertake this important service and even to extend their responsibilities further. The interest which they take in the scheme is evidenced by the presence here to-day of Dr. Alan Tuke, one of their number.

In both England and Ireland institutions likewise exist, although not so happily endowed, which are well able to give to the teachers selected to act as recorders the small amount of training in anthropometric methods which is required.

Mr. LEHMANN: I will now call upon Mr. Gray, Treasurer of the Royal Anthropological Institute, and Secretary of the Anthropometric Committee of the British Association.

Mr. J. GRAY: Sir Henry, I had the honour to present to you a memorandum indicating very briefly the objects, constitution and cost of the proposed National Anthropometric Survey. I shall confine my remarks to explaining in some greater detail some of the statements in that memorandum. I have said that the proposed National Anthropometric Survey is to collect exact data of the physical and mental characters, the health and the environment of the people. This can be done by measuring sufficient samples of the people at intervals of ten years. A survey on a small scale could be carried out by a staff for which I have estimated the cost would be £4,000 to £5,000 per annum. This staff would contain a measuring or surveying group, and a statistical group with necessary officers. Six surveyors could measure 2,000 adults and 4,000 school children taken at two selected ages in each of 100 districts in the course of ten years. This would amount to about 1 per cent of the adult population and 5 per cent. of the school children. The Director of the Anthropometric staff would issue an annual report, and would be advised by a Consultative Committee or Advisory Council, containing experts in the sciences concerned with the evolution of man, and representatives of the Departments of State within whose province the questions touching the physical well-being of the people fall. All data collected by measurers would be sent to the Central Bureau to be analysed by the Statistical staff. In many cases, measurements would be made by teachers, medical officers of health, and others who, in the course of their official duties, come in contact with the people. These local measurers would be instructed or tested by the surveyors from the Central Bureau to secure uniformity of methods. It is understood that local measurers would be paid by local authorities. Averages and correlations would be worked out by the Statistical staff. This staff would also ascertain under what conditions the physique of the people was improving and under what conditions it was deteriorating. That, I think, is the information that a statesman requires to guide him in bringing about social legislation. The longer this institution has been established and the more data it has collected, the more valuable will be the information that can be supplied by it. The maintenance of the physical and mental condition of the people at the highest possible standard is obviously one of the first and most important duties of the Government. The first step to be taken in dealing with the question of the improvement of the national physique is the establishment of such a survey as has been described. The environment of an industrial community like this has in the last century changed to a very great extent. For instance, we have had the continuous urbanisation of the population, and a very large proportion of the population has migrated into towns, chiefly into industrial towns. The changes in the character of the people that have been produced by this change of environment will be found to be much greater than is suspected. We have recently carried out in Scotland a survey of the hair- and eye-colours of the whole of the school children, about half a million of them, and the result of that has been to show that in Glasgow, for instance, the population is so very different from the average population of Scotland that the people of Glasgow can no longer be regarded as Scotch. Whether the change is for the better or the worse remains to be seen. This change is the result of the peculiar environment of a large industrial seaport town. Then there is the question of the effect of alcoholism upon the population. Well, of course, there can be no doubt as to its evil effects on the living generation, but it is by no means certain what effect the alcoholism of the present generation will have on the next generation; that question would be settled by the survey. There is also the interesting question of the effects of changes in the death-rate and the birth-rate, which are very important questions at the present time, in connection with proposals for the reduction of infant mortality. Will the reduction of this infant mortality improve the physique of the next generation? All changes brought about in the population no doubt have a very marked effect upon the welfare of the nation. The survey would supply data showing exactly what changes are taking place, and would help you to devise measures to counteract deterioration as far as possible. We usually look to the Germans for the practical application of science, and the Germans have already started a survey which will amount to measuring about 1½ million conscripts every ten years. I do not see why this country should always look to Germany for guidance in the application of science to public affairs. We have very distinguished scientists in this country, and it is the fault of the Government if the advice of those experts is not taken for the benefit of the country. This scheme is supported almost unanimously by all our most distinguished scientists, as you might infer from the number of distinguished names associated with this deputation. I would submit, in conclusion, that you have a plan here which is quite feasible, and that the cost is moderate. The annual cost of surveying the geological strata is £18,000; and we only ask for £5,000 a year to survey the sociological strata, which we consider to be of vastly greater importance.

Mr. LEHMANN: I will now call upon Dr. Gow, head-master of the St. Peter's College, Westminster.

Dr. GOW: Sir Henry, I am asked as a schoolmaster to give my view as to what the effect on schools might be from this survey. I should say at once that we are somewhat hindered in our work for the want of knowing the average standards of the physique of children. It is not of the greatest importance that the standard be strictly accurate, but what is wanted is a standard which should be known, so that expert observers like schoolmasters and doctors, when they meet together, may be speaking about the same thing. Now, each of us has his own rule of thumb. I could give you some examples of the difficulties that we encounter. A great many boys are deaf or short-sighted, or astigmatic, and so suffer from their eyes, and these facts are not really suspected until a considerable time has elapsed. Then generally with regard to the weight, we have no standard of the normal weight of a boy at a certain age. As to height, again, one is apt to go by general impression. I remember on one occasion I wanted to say in a public meeting that girls were increasing in stature, but it was only an impression of mine. I went, therefore, to a ladies' tailor, and he informed me that the sizes of ladies' ready-made goods had been put up. In regard to boys also, I have an impression, which has been growing, that boys nowadays attain their full size rather sooner than they used to do. I do not know whether that is true, but it can be discovered if investigations of this kind are going on; and it may be a very important matter in the description of the progress of the race. If I had taken observation of all my boys, I should have nothing to compare with them. What is required is that a large number of observers should be trying to do the same thing. If we were doing it under direction, knowing that our observations would be tabulated and summarised, a general and interesting result could be procured.

Mr. LEHMANN: Sir Lauder Brunton, who represents the British Science Guild, will now address you.

Sir LAUDER BRUNTON: Sir Henry, I am representing here the British Guild of Science, of which Mr. Haldane is the President, and Sir Norman Lockyer is the Chairman of the Council. The subject of an anthropometric survey has been before them, and has been considered to be one requiring to be gone into, and gone into thoroughly. It is not merely a question of scientific interest, but one of the utmost practical importance to the country. We consider ourselves to be a business people, and yet we deal with one of the most important matters in the country, viz., with the population, upon a worse basis than other countries. There is no respectable business firm in the City that would go on from year to year without stock-taking, not only noting whether their stock had increased or decreased, but whether it had undergone any deterioration, and if so, how much; and yet we go on year after year, and are content with a ten-yearly census, from which we learn merely the numbers of the people without any information whatever with regard to the character of them. And yet the character and physique of our people must be changing, and changing rapidly; because not only do we find alterations in the proportions of people in the country and in the towns, but we find that the picked men of the country go off to the Colonies; and therefore the best men are taken away from the country to the detriment of its physique. At the same time, we find there is an influx of aliens not always desirable, and likely to influence us unfavourably; yet we are taking no stock of the character of our population. So little do we know about it that when a question of great practical importance is raised, we are unable to answer it. In the Blue Book containing the fourth report of an inquiry before a Select Committee of the House of Lords, a very curious point was brought out, viz., that the northern half of England is drunken and the southern half of England is sober; and that these two halves are separated by a straight line which may be drawn from the Wash to the Severn. I tried to find out why one-half of England was drunken and the other half was sober. I tried the geographical method, but it did not succeed; I tried the geological method, but it also failed; I tried the industries, but did not find an answer. No complete answer could be obtained, because we wanted an anthropometrical survey, and that could not be obtained. That is one reason why it is needed. Our first great practical object is to ascertain whether the race is deteriorating. But this is not all: we want to prevent deterioration; we want to stop it if it is taking place; and in order to do this, we must have a survey of the people, and more especially, we must begin with a survey of the school children. We should have each child, when it enters school, examined anthropometrically. We should have its height, its girth, and certain other things about it. We should also have it examined when it leaves school, because we should then be able to see what progress it had made. In a short time, within twenty years, we could probably have a sufficient anthropometrical survey of the whole Kingdom, which would be of the very greatest use, because not only should we know whether we were advancing or not, but we could utilise this survey in the meantime to compare district with district and ascertain whether the children of any particular district were below the averages which were obtained in the rest of the country The next question would be, "Why are they below the average?" Of course, more than this we ought to have, but this is the minimum, I think, that we should ask for; and if we can get this, I am quite certain that before very long we shall not only ascertain definitely whether there is or there is not physical deterioration, but we shall be able to prevent it; and if any such deterioration should exist, we shall be able to cure it.

Mr. LEHMANN: I will now call upon Dr. Haddon, of Cambridge, to address you.

Dr. HADDON: I would like to say, Sir Henry, that while I most thoroughly approve of the economical and practical aspect of the proposed survey, I would like to point out that it has a scientific bearing on the distribution of the races of Britain. We have very accurate knowledge of the distribution of the different elements in the population of France, Italy, Sweden and Spain, but when we come to study the anthropology of our own country, data are almost entirely absent. This information is important not only from the anthropological point of view, but from the historical. The data acquired from such a survey would serve to wipe away the reproach that other countries are ahead of us in this respect. Therefore, from the purely scientific point of view, it would be of very great advantage if this survey were carried out.

REPLY.

The PRIME MINISTER, in reply, said: Mr. Lehmann and Gentlemen, I am very much obliged to you for coming here to-day, as also are my colleagues in the Government, I have no doubt. There is one of them here from the Education Department, and the others, when they know the line you have taken and the points you have brought forward, will no doubt feel as interested as I feel. I confess I have been much impressed with what I have read, and still more to-day with what I have heard. The points have been very well put as to the great lack that there is in this country of knowledge of the most important point of all, namely, knowledge of the quality of the population. We have elaborate periodical surveys of the distribution and the changes of the population and of their outward employments and so forth, but we leave alone the very grave matter of their actual physical condition and their quality as citizens. The words that have been used as to the backward state in which we are with regard to this important subject have been not at all too strong, and I feel there is a great field open for the public advantage if this hiatus were filled up. It is so obviously desirable to have a record, not in order to satisfy curiosity only, or to fit in with this man's theory or that man's theory, but in order that we may be able to study the changes in the condition of the people at large as a guide to action in administration and in legislation regarding it. We now fumble and grope our way without any definite knowledge really of the facts with which we are dealing. I am strongly impressed by it. Any test applied to the condition of the inhabitants of any district is a test of their surroundings; it is a test of the mode in which they live and the circumstances which affect their health and utility; and therefore that cannot be an unimportant thing, and we should watch it and be guided by it.

But, of course, you will not expect me to be prepared to say anything definite on the part of the Government. It is a matter, I need hardly say, in which, however urgent we may think it, and however important, we must go somewhat warily. For one thing, we have to carry public opinion with us. I think that the publications which are issued from different sources and the Reports of one or two Royal Commissions have done much to impress the public mind of the importance of this question. But still, when you undertake to apply this sort of examination to adults and to the children of parents, you have to carry both the adults and the parents with you; and if you are supposed to be going too fast, or interfering too much, I can conceive that the thing would be rather set back than set forward. Then another thing is, that of course there must be absolute accuracy in the men's training in expert knowledge in the expert application of the tests. I am glad to hear from one of the speakers, from Dr. Cunningham, I think, that there is in Scotland at least—and I am proud to say in my own constituency—an institution which is quite capable and anxious to undertake that duty of training; and I am relieved to find from all that is said that there are other, although not so well endowed, institutions in England and Ireland which would deal with that work. That is so far very satisfactory, no doubt, and of course gives encouragement.

And another thing that I would say is this: that it would be very desirable to avoid any impression that this was a sort of experiment that was being practised upon the poor children in the common schools. Whatever is done to the poor ought also to be done to the rich. That, I think, if you are going to carry public feeling with you, and to prevent all sorts of impediments coming in the way, I think the application of this system ought to be universal. In fact, it would cease to have its proper value if it were confined to the poor schools, which are, of course, I suppose, a little more at the disposal of the Government and the authorities than the great schools, such as Westminster and others. The Westminster School, I have no doubt, is quite willing to submit itself to the ordeal of its humbler neighbours.

Then another thing that occurred to me on reading the papers, is that at present, of course, we can get very lively reading, I daresay, and very interesting results, from the consideration of the different quality and characteristics of the classes over whom the Government and authorities have certain powers of control, such as recruits, lunatics and criminals. But after all, as I say, that may be very interesting and sometimes amusing, but it does not give us what we want. We want the whole population; we want especially—and this is a very important point—that our minds should be directed to the comparison between different districts, and therefore probably on that there may rest very different occupations all round. Dr. Brunton pointed out to me that the north half, roughly, the north and west portion of England and Wales, was much more drunken than the south and east. I am glad he did not carry his map very far north, or he and I and some others here might have been hanging our heads.

But these are really things that occur to me, that we must walk somewhat warily, because the least idea getting about that we are taking advantage of the children of the public schools to be made a plaything or an experiment upon, would be very fatal. Therefore it must be quietly done. Now, last year, as we all know, there was an Education Bill before Parliament, and a part of that Bill dealt with hygiene and sanitation, which was, I think, universally approved of, and I think that it was intended to pass that as a thing by itself, greatly to the public advantage. That is really a first step in the direction in which you seek to move. Whether the Government could see their way, after full consideration and enquiry, to graft upon that a more definite organisation, to which you refer, I cannot say, because the element of cost comes into all these things. Yours may seem to be a very modest sum. I do not deny that it is. At the same time, a great many modest sums make up a large sum, and it is not for me specially to compromise the attitude of the Treasury in that respect, and to lead to expectations that may not be entirely fulfilled. But I do not know that the mere question of cost ought to, or is likely to, stand in the way of a great scheme of this sort, if the Government are satisfied after full consideration—which I promise you shall be given to it—that we are really ripe—I think you will say that we are really more than ripe, rotten ripe—if they could prove that we are ripe and that this is a judicious moment at which to begin this new enterprise. If I may say so, it is very creditable to and characteristic of your patriotic feeling to have taken the trouble to come here to-day to say what you have said and to impress upon us the gravity of the position and the necessity for some such staff as you desire. The only answer I can give, which is not, of course, very satisfactory, but which I think is the usual one at this stage of a proposal of this kind, is that we will give it the most earnest and careful consideration, and we shall be very glad indeed if we find that we can give the assistance that you require.

Mr. LEHMANN: Sir Henry, we beg to thank you very much for your courtesy in receiving this deputation and the words of encouragement you have given to us. I need only add that this deputation asks for no compulsory powers.

(The Deputation then withdrew.)

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